

# Prince Declaration

## Exhibit 1

May 25, 2022

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**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

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HACHETTE BOOK GROUP, INC.,  
HARPERCOLLINS PUBLISHERS LLC,  
JOHN WILEY & SONS, INC., and  
PENGUIN RANDOM HOUSE LLC,

Plaintiffs,

Case No. 1:20-cv-04160-JGK-OTW

v.

INTERNET ARCHIVE and DOES 1 through  
5, inclusive,

Defendant.

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**AMENDED EXPERT REPORT OF JEFFREY T. PRINCE**

**HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY**

**May 25, 2022**

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## **I. INTRODUCTION**

### **A. Qualifications**

1. I am an economist, tenured professor, and Chairperson of Business Economics and Public Policy at the Kelley School of Business, Indiana University. I am also the Harold A. Poling Chair in Strategic Management, Co-Director of the Institute for Business Analytics at the Kelley School, Advisory Committee Member for the Indiana University Center for Survey Research, and Faculty Affiliate of the Indiana University Data Science Program. From Fall 2019 to Fall 2020, I served as Chief Economist at the Federal Communications Commission.

2. My research focuses on technology markets, consumer demand, and quality competition. Many of my published papers utilize and analyze market data and/or survey data and involve estimates of consumer preferences for product attributes as well as substitutability across products. I have developed and taught courses on economic regulation, including topics concerning intellectual property and copyright. I am the sole author of a recently released textbook with McGraw-Hill Education on predictive analytics and a co-author of a managerial economics book entitled Managerial Economics and Business Strategy, published by McGraw-Hill Education.

3. I graduated from Miami University with a B.S. in Mathematics and Statistics and a B.A. in Economics in 1998. I then received my Ph.D. in Economics from Northwestern University, specializing in Industrial Organization. Since earning my Ph.D. in 2004, I have published more than 25 research papers utilizing a wide range of econometric techniques and economic models, many in top economics and management journals. Appendix A provides my current CV, and Appendix B provides a list of matters in which I have given testimony during the last four years.

### **B. Compensation**

4. I am being compensated for my time preparing this expert report at my hourly rate of \$950. I have been assisted in these matters by employees of Analysis Group Inc., who worked

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under my direction. My compensation in these matters is not in any way contingent or based on the content of my opinion or the outcome of this or any other matter.

### **C. Background**

5. Plaintiffs Hachette Book Group, Inc. (“Hachette”), HarperCollins Publishers LLC (“HarperCollins”), John Wiley & Sons, Inc. (“Wiley”), and Penguin Random House LLC (“Penguin Random House”) (collectively, the “Plaintiff Publishers” or “Plaintiffs”) have brought the above captioned action against Defendant Internet Archive (“Internet Archive” or “IA”) alleging that Defendants “engaged in willful mass copyright infringement,” violating the Plaintiffs’ exclusive rights under 17 U.S.C §106.<sup>1</sup> As stated in the Complaint, Internet Archive “scans print books, uploads these unauthorized scanned books to its servers, and distributes verbatim digital copies of the books *in whole* to the public via public-facing websites,” (hereafter, the “Free Ebooks Website”), all “[w]ithout any license or payment to authors or publishers.”<sup>2</sup>

6. In the complaint, Plaintiff Publishers name 127 “Works in Suit” as examples of their works on Internet Archive’s Free Ebooks Website.<sup>3</sup> All of the Works in Suit are books published by the Plaintiffs that are available in print and ebook format in the consumer and library market.<sup>4</sup> Internet Archive allegedly follows a variant of “Controlled Digital Lending” (“CDL”) that includes some limitations to access the ebooks on their Free Ebook Website, including what it calls a 1:1 own-to-loan ratio and Digital Rights Management (“DRM”) technology. During the COVID-19 pandemic, IA removed the 1:1 own-to-loan ratio and ended waitlists, offering “an enormous universe of scanned books to an unlimited number of individuals simultaneously in its ‘National Emergency Library.’”<sup>5</sup>

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<sup>1</sup> Hachette Book Group, Inc., et al., v. Internet Archive, United States District Court, Southern District of New York, Case No. 1:20-cv-04160-JGK-OTW, Complaint for Copyright Infringement dated June 1, 2020, ¶ 2 (“Complaint”).

<sup>2</sup> Complaint, ¶ 2. The public can access the Internet Archive’s free digital books either through the Open Library website, <http://openlibrary.org>, or through the Internet Archive’s general website at <http://archive.org>, which hosts the digital files. The lawsuit concerns the works in Internet Archive’s “inlibrary” collection, also called the “Books to Borrow” collection, and my report is solely focused on those works.

<sup>3</sup> Complaint, Exhibit A.

<sup>4</sup> Complaint, ¶ 44.

<sup>5</sup> Complaint, ¶ 8.

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7. I have been asked by counsel for Plaintiffs to:

- Explain the economics of copyright protection in the market for books.
- Assess Plaintiffs’ role in the market for distribution of ebooks to libraries and consumers.
- Assess the effect of Internet Archive’s alleged infringing conduct on Plaintiffs.
- Evaluate Internet Archive’s assertion that its challenged conduct “serves the public interest.”
- Assess Internet Archive’s experts’ opinions and analyses.

8. In preparing this report, I have relied on my experience and research. I have also examined and relied on documents related to this litigation and public sources, including academic articles and textbooks. A complete list of the materials upon which I relied is attached to this report as Appendix C.

**E. Summary of Opinions**

9. Based on the information available to me and my analysis to date, my opinions are as follows.

- Economic incentives are essential and necessary to encourage the creation of artistic works (including books, music, film, and other artistic creations) and maintaining well-functioning markets for creative works.
- One aspect of properly conceived economic incentives is that rightsholders (authors and publishers) have the opportunity to earn compensation from the distribution of their creative works. To this end, it is important for rightsholders to have the exclusive right to determine, for the term of copyright: the format in which their works are offered to the public; whether to license or sell their works; marketing and distribution strategies; pricing; and what terms and conditions to impose for each format and channel, to the extent allowed by law, including restrictions (if any) on reproduction, sharing, and distribution.
- For more than a decade, the Plaintiff Publishers, in partnership with library aggregators and libraries, have contributed to the establishment of a market for the promotion, distribution and licensing of ebooks (including the Works in Suit) to libraries, and the loaning of ebooks to library patrons. Market statistics, such as presented below, indicate a well-functioning market:

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- i. The market for ebooks, including a market for lending ebooks through libraries, has successfully delivered ebooks to hundreds of millions of Americans. OverDrive, one of the library aggregators in the market, processed approximately [REDACTED] loans of ebooks to library patrons from all publishers in 2020.<sup>6</sup>
  - ii. Between 2010 and mid-2021, Penguin Random House earned approximately [REDACTED] in net revenue from digital content (including ebooks and digital audio) in the library market.<sup>7</sup>
  - iii. Between 2017 and 2020, HarperCollins earned [REDACTED] in revenue from ebooks in the library market.<sup>8</sup>
  - iv. Between 2017 and 2020, ebooks published by Hachette and licensed to libraries were checked out by patrons through library aggregator OverDrive over [REDACTED].<sup>9</sup>
- In statements to this court, IA wrongly conflates the print and ebook formats.<sup>10</sup> Print books and ebooks differ in meaningful ways that are important to this case. Illustrations of this point include:
  - i. Digital book files have very different characteristics from print books, including their reproduction and distribution capabilities, which require limits and protections to preserve the economic incentives for rightsholders.
  - ii. Print and ebooks have different expected sales, investments, production costs, and distribution channels.
  - iii. Rightsholders have determined that the different economic characteristics of the print and digital formats may necessitate ebook terms and conditions and pricing that differ from those of print books, including whether the work is sold or licensed, and any other limits to reproduction, sharing, and distribution.
- Internet Archive has caused and continues to cause economic harm to Plaintiff Publishers and authors.
  - i. Internet Archive offers digital copies of books, including the Works in Suit, to consumers at no cost, under “library-style

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<sup>6</sup> Spreadsheet produced by OverDrive, “1 & 2 - CONFIDENTIAL - Checkout Data.xlsx.”

<sup>7</sup> PRH0058941.

<sup>8</sup> HC0030132.

<sup>9</sup> HACHETTE0002574.

<sup>10</sup> Defendant Internet Archive's Answer and Affirmative Defenses to the Complaint dated July 28, 2020, p. 3.



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lending”<sup>11</sup>. However, it fails to acquire authorized ebooks for the Plaintiffs’ works it offers, and fails to pay Plaintiff Publishers a fee for its library-style distribution of ebooks.

- ii. Internet Archive’s unauthorized conduct likely has caused Plaintiff Publishers to lose revenue from sales and licenses to libraries and consumers.
  - iii. Internet Archive has devalued Plaintiff Publishers’ works by offering them for free.
  - iv. Internet Archive has exposed Plaintiff Publishers and their authors to the risk of inadequate protection of their intellectual property.
  - v. During the time period of the so-called “National Emergency Library,” when the Internet Archive abandoned the 1:1 own-to-loan ratio and all waitlists for books, market harm likely was even greater.
- Internet Archive’s conduct, if allowed to continue, harms consumers because it disrupts and reduces the incentives to create. Because IA’s conduct harms rightsholders and consumers, it cannot be in the public interest.
  - IA’s experts do not demonstrate that its actions did not create market harm. To the contrary—Ms. Hildreth acknowledges that Internet Archive’s conduct likely caused plaintiffs lost revenues from licensing fees and sales of the Works in Suit to libraries.
    - i. Dr. Jørgensen and Dr. Reimers do not offer an opinion regarding an effect of IA’s failure to pay a fee to Plaintiffs for distribution of ebooks in library-style lending or of IA’s conduct on sales to U.S. libraries.
    - ii. Dr. Reimers studies print books, and does not study ebooks, either in the retail or library market, contrary to findings in her own prior research that ebooks are the “closest substitute” to digital copies of print books.
  - For the distribution channels analyzed (Hachette’s paperback and ebook sales, Amazon sales rankings of print books in the retail market, and library checkouts on OverDrive), Dr. Reimers and Dr. Jørgensen do not establish that Internet Archive’s conduct did not reduce Plaintiff Publishers’ revenues from licensing fees and sales, because they fail to differentiate between the effect of IA’s conduct and effects of other market events unrelated to IA’s conduct.

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<sup>11</sup> For example, the landing page states “Internet Archive is a non-profit library of millions of free books...” Internet Archive, “Home Page.” (<https://archive.org/>, viewed on April 27, 2022.)

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- Dr. Reimers’ and Dr. Jørgensen’s statements regarding the size of the market are misleading and do not justify IA’s conduct.

10. My work on this matter is ongoing. Should new information become available, I may revise my opinions. I also intend to review any additional information or reports that may be submitted by Plaintiffs and their expert(s) following this report. I reserve the right to revise and/or supplement my opinion.

## II. FACTUAL CASE BACKGROUND: INTERNET ARCHIVE’S CONDUCT

### A. Scanning of print books

11. Internet Archive has obtained print books, including the 127 Works In Suit, and created digital copies of the print books by scanning them at various locations.<sup>12,13</sup> The sources for IA’s print books have varied over time. Internet Archive has acquired print books through donations of used books and purchases of used books,<sup>14</sup> including after an entity affiliated with

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<sup>12</sup> See Expert Report of Ian Foster dated February 25, 2022 (“Foster Report”), ¶ 85, which discusses Internet Archive’s proprietary “Scribe” workstations that take photographs of print books.

<sup>13</sup> See, e.g., Deposition Testimony of Andrea Rogina Mills taken October 14, 2021 (“Mills Deposition”), pp. 33:25-34:5 (explaining that the two “locations outside the United States of digitization centers that the Internet Archive has hired to digitize in-copyrighted books” are in Cebu, Philippines and Shenzhen, China); *id.* Pp. 131-33 (explaining that Internet Archive employees and third-parties engaged by Internet Archive (including Datum Data and Innodata) scan in-copyright titles abroad at “Internet Archive [] digitization centers” and in select locations in the United States, although Internet Archive’s only “scanning supercenter” which operates more than ten tabletop scribe scanning stations is located in Cebu, Philippines).

<sup>14</sup> See, e.g., INTARC00397105 (B Kahle explains “What do we do to get the books we want? We believe we can get a couple of million books that we do not already have for maybe \$1 each.”); Mills Deposition pp. 88:23-89:7 (“Q Could you list for me the different ways in which Internet Archive currently obtains the in-copyright books that it scans? A So I think the main avenues are direct donation from a library to the Internet Archive. There is still some acquisition in terms of purchasing books from a few different sources, and one of those related sources is through Better World Books.”).

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IA purchased Better World Books, a used bookstore, in November 2019,<sup>15</sup> enabling IA to scale up.<sup>16,17</sup>

12. Internet Archive’s scanning and processing steps that create digital books result in several file formats, including PDF and ePUB formats.<sup>18</sup> Internet Archive describes their PDF scans as “High Quality Page Images.”<sup>19</sup> IA’s scans are an exact copy of the book, without the addition of anything new or different in terms of content.<sup>20</sup> Plaintiffs’ deposition witnesses have explained that the quality of IA’s scans “is slightly inferior to what we would produce, but it’s still all the content is available and easily readable.”<sup>21</sup> IA witnesses have also testified that IA is trying to further improve the quality of its ePUB format files, which they state currently “may contain errors.”<sup>22</sup>

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<sup>15</sup> See, e.g., BWB\_00424 (Memorandum of Understanding between IA and BWB explaining that “[redacted]” and that “[redacted]”); BWB\_000426.

<sup>16</sup> See Internet Archive “For the Love of Literacy–Better World Books and the Internet Archive Unite to Preserve Millions of Books,” November 9, 2019. (<http://blog.archive.org/2019/11/06/for-the-love-of-literacy-better-world-books-and-the-internet-archive-unite-to-preserve-millions-of-books/>), (“This new relationship will allow Better World Books to provide a steady stream of books to be digitized by the Internet Archive, thereby growing its digital holdings to millions of books.”); Mills Deposition p. 90:17-20 (“I believe at this particular point, the majority of the books we are digitizing for the modern collection come from Better World Books rather than directly from a library”).

<sup>17</sup> Internet Archive also scanned books owned by libraries through its library scanning business, although the vast majority of these works were public domain titles. See, e.g., Deposition Testimony of Chris Freeland taken December 17, 2021 (“Freeland Deposition”), p. 304:13-16 (explaining that through scanning agreements with libraries, Internet Archive was “scanning materials that are in the public domain. So they are not available for lending, and they’re made available for download.”); see also sample Partner Library scanning agreements: INTARC00137512; INTARC333600; INTARC00140956.

<sup>18</sup> Foster Report, ¶¶ 97 - 100.

<sup>19</sup> See INTARC00169341; INTARC00138760.

<sup>20</sup> “IA scans the complete book and without adding any content to the book.” Foster Report, ¶ 103.

<sup>21</sup> Deposition Testimony of Chantal Restivo-Alessi taken December 1, 2021 (“Restivo-Alessi Deposition”), p. 36:18-21. See also Deposition Testimony of Jeff Weber taken November 19, 2021 (“Weber Deposition”), p. 215:17-21 (explaining that the quality of IA’s ebooks is “not as good as an eBook that we would put out, but I think it’s probably good enough for those who are willing to make the tradeoff and get something for free that they could have otherwise paid for.”).

<sup>22</sup> See Mills Deposition, p. 240:21-24 (describing ongoing investments in the generation of ePUBs, explaining “[w]e sort of constantly are working on the software and processes, so they’re living processes”).

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13. It is my understanding that Internet Archive digitizes books from a variety of genres, including adult fiction and other non-educational titles.<sup>23</sup> IA employees have testified that there is an effort to not offer ebooks on the Free Ebooks Website that have been initially published within the last five years,<sup>24</sup> though IA has digitized some titles published within the last five years<sup>25</sup>

## **B. Operation of the Free Ebook Website**

14. Internet Archive distributes digital books of in-copyright works on its Free Ebook Website.<sup>26</sup> Internet Archive describes itself as a library.<sup>27</sup> IA also serves a function akin to a library ebook aggregator (a centralized entity that makes short-term “loans” or distributions of ebooks published by many different publishers to users, with DRM protection to prevent further copying by the user).<sup>28</sup> There is one crucial difference—for in-copyright titles, Internet Archive

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<sup>23</sup> See, e.g., INTARC00151754 (print-out of Open Library website as of February 2021 reflecting at the very top of the page the ability to “browse by subject”, listing art, science fiction, fantasy, biographies, recipes, and romance – along with other collections including “Thrillers”).

<sup>24</sup> See, e.g., Freeland Deposition, p. 211:11-19 (“Q Does the Internet Archive have specific policies for determining what books are included in the lending library. A Yes. Q What are those policies? A The one that comes to mind is that we don’t make books available through lending that have been published within the first five years of their publication history.”).

<sup>25</sup> See Exhibit A to Complaint (listing two works in suit published in 2019, Barry Levine’s “All the President’s Women: Donald Trump and the Making of a Predator” and Gregory Zuckerman’s “The Man Who Solved the Market”).

<sup>26</sup> A user can access Internet Archive’s scans of in-copyright print books through the main IA website and IA’s Open Library site. A user may arrive at either of these sites through a general internet search or from hyperlinks on another website, including IA affiliate Better World Books. The main IA site includes two headers a user can navigate to, “Books to Borrow” and “Open Library,” the latter of which takes the user to the Open Library site where they can similarly access scanned in-copyright books. See Foster Report, ¶¶ 25, 26, 49.

<sup>27</sup> See Internet Archive, “Home Page.” (<https://archive.org/>, viewed on April 27, 2022), (“Internet Archive is a non-profit library of millions of free books, movies, software, music, websites, and more.”); INTARC00142017 (“We want to offer up greatest digital library the internet has ever seen. To the world. For free.”); INTARC00141495 (“Open Libraries seeks to build the online equivalent of a great, modern public library, providing millions of free digital books to billions of people.”); Open Library, “Borrowing Books Through Open Library.” (<https://openlibrary.org/help/faq/borrow>, viewed on April 28, 2022), (“The Internet Archive and participating libraries have selected digitized books from their collections that are available to be borrowed by one patron at a time from anywhere in the world for free. [ . . . ] You can borrow ten books at a time from Open Library. Loans are for one hour for browsing and/or 14 days if the book is fully borrowable. When loans expire the books will be disabled on your device.”).

<sup>28</sup> See Weber Deposition, p. 203 (“we know for a fact that the Internet Archive is presenting themselves as an aggregator, and aggregators that we deal with pay us. So we know that right off the bat, there’s . . . revenue that we should have that we’re not having. Because they act on their own. They don’t pay us. They don’t actually act the way an aggregator should.”)

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does not obtain authorized ebooks and does not make any payments to rightsholders (publishers and authors), which is what libraries do to be able to distribute ebooks of in-copyright titles to their patrons.<sup>29</sup>

### 1. *Internet Archive’s library-style lending*

15. Anyone around the world with an internet connection can access in-copyright ebooks free of charge after creating a user account on IA’s Free Ebook Website.<sup>30</sup> For in-copyright works, Internet Archive purports to operate the Free Ebook Website under a version of “Controlled Digital Lending.”<sup>31</sup> Internet Archive’s library-style lending limits the time frame during which users can access the work on the Free Ebook Website and the number of users that can access the work at any given time. Internet Archive also adds DRM (Digital Rights Management) to the ebook files.<sup>32</sup> Prior to the complaint, Internet Archive provided ebooks of in-copyright titles for a 14-day loan, and after the litigation was filed in June 2020, Internet Archive introduced 1-hour loans, although numerous works are still eligible for 14-day loans.<sup>33</sup> In addition to restricting the time frame during which a user can borrow an ebook, Internet Archive purports to restrict the number of digital copies of a particular book that can be loaned

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<sup>29</sup> See Freeland Deposition, p. 96:17-20 (“Q So Internet Archive does not pay license fees to obtain digital copies of books, correct? Q Correct.”); *id.* At p. 98:16-20 (“Q Does the Internet Archive pay authors royalties for making their books available for free on their website? A No.”). I discuss the library ebook market in Section IV.B.

<sup>30</sup> Foster Report, ¶¶ 19, 32.

<sup>31</sup> See, e.g., Internet Archive, “Controlled Digital Lending Explained,” February 10, 2021. (<https://archive.org/details/controlled-digital-lending-explained>), (“Controlled Digital Lending is the library practice whereby a library owns a book, digitizes it, and loans either the physical book or the digital copy to one user at a time.”); Internet Archive, “Librarians Share Benefits of Controlled Digital Lending,” August 8, 2019. (<http://blog.archive.org/2019/08/08/librarians-share-benefits-of-controlled-digital-lending/>), (“As technology advances, so too does the ability to lend books efficiently, easily, and broadly, specifically with CDL. With CDL, a library digitizes a book it owns and lends out one secured digital version to one user at a time. It is the digital equivalent of traditional lending.”).

<sup>32</sup> Foster Report, ¶ 23; see also, e.g., PLAINTIFFS0000632 (“Open Library Design Ecosystem” describing the use of “Offline DRM Epub + PDF” to read books borrowed from IA); Deposition Testimony of Michael Karpeles taken October 27, 2021 (“Karpeles Deposition”), pp. 113:2-114:23 (describing IA’s application of DRM technology to copies of ebooks patrons download from the Open Library website).

<sup>33</sup> See Foster Report, ¶ 24. According to IA’s current CDL policy: “Patrons now have a choice in selecting the loan period when they borrow a book. Patrons can choose a short-term access for 1 hour, or a longer 14-day loan. If we only have 1 copy of that edition of a book, it is only available for 1 hour loan. If we have more than one copy of a book, it can be checked out for either 1 hour or 14 days, depending on availability. If there are no copies available for 14-day loans, users can join a waitlist. There is no waitlist available for books that only offer 1-hour loans.” Foster Report, ¶ 43.

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on its Free Ebooks Website<sup>34</sup> through a “1:1 ‘owned to loan ratio,’”<sup>35</sup> or equivalently, by implementing a “maximum eligible concurrent loan limit.”<sup>36</sup>

16. The nature of the maximum eligible concurrent loan limit, and therefore, IA’s CDL policy, has changed over time. Prior to 2018, user access largely depended on the number of print books that IA had physically acquired and stored in its warehouse.<sup>37</sup> Typically, once the number of loans reached the number of copies owned by Internet Archive, a user had to go on the wait list.<sup>38</sup> Starting in 2018 and to this day, as a result of IA’s “Open Libraries” initiative, access to an ebook copy is no longer determined largely by the number of print books that IA has physically acquired and stored; it also depends on the number of books owned by partner libraries in the Open Libraries program,<sup>39</sup> which I discuss in greater detail below. During the period of the National Emergency Library (March-June 2020), Internet Archive abandoned this core principle of “Controlled Digital Lending” and user access was unlimited.<sup>40</sup>

## 2. Open Libraries Program

17. Internet Archive’s “Open Libraries” initiative was developed starting in 2018 to increase the number of users who can read a given ebook at a time through arrangements with

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<sup>34</sup> Foster Report, ¶ 23.

<sup>35</sup> Foster Report, ¶ 23; Freeland Deposition, p. 118:10-11 (observing that “The owned-to-loan ratio is a key principle... of controlled digital lending”).

<sup>36</sup> Foster Report, ¶ 66.

<sup>37</sup> Foster Report, ¶ 63. Deposition Testimony of Brenton Cheng dated December 3, 2021 (“Cheng Deposition”), pp. 127-28.

<sup>38</sup> Foster Report, ¶ 75. There were also limited number of scans made of in-copyright books through agreements with libraries that predated IA’s Open Libraries program. *See* Mills Deposition pp. 40-41 (testifying that IA began to scan in-copyright books in 2009); *id.* p. 71:19-21 (explaining that “some” of the books in IA’s ‘inlibrary’ collection “were digitized by Internet Archive at the request of another entity and [IA] w[as] paid”).

<sup>39</sup> *See, e.g.*, Foster Report, ¶¶ 134, 136 (“IA has developed an initiative known as ‘Open Libraries’ to increase the number of users who can read a given scan at one time. I refer to this number as the ‘maximum eligible concurrent loan limit’ for the scan. In the Open Libraries initiative, IA partners with libraries to leverage their holdings of physical books to, in effect, count their print copies as additional copies that IA may lend as digital books, without doing any re-scanning... IA considers a scan to be backed by multiple physical copies: the one that IA photographed and placed in storage, and one or more other different physical books with the same ISBN numbers purportedly maintained in the collections of partner libraries.”).

<sup>40</sup> Freeland Deposition, p. 242:11-18 (those accessing the National Emergency Library did not need to certify “that they were directly impacted by COVID-19” as “[t]here were no limitations to access to the National Emergency Library”).

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so-called “partner libraries” (*i.e.*, to leverage their print copies).<sup>41</sup> Under this program, a partner library provided Internet Archive with a list of ISBNs of its physical books. IA would then compare the list of print books in the partner library’s collection to a list of ISBNs it had assigned to that title on its Free Ebook Website to determine the number of items in common, in a process referred to as “overlap analysis.”<sup>42</sup> Internet Archive then considered each overlapping ISBN from books available in partner libraries’ collections as “contributed,” and increased the number of “concurrent copies” of the associated title listed on the Free Ebook Website.<sup>43,44</sup> This increase in the maximum eligible concurrent loans gained through the Open Libraries Program did not involve scanning physical books from partner libraries.<sup>45</sup>

18. Crucially, the partner library is supposed to take the physical copy contributed to Internet Archive out of circulation.<sup>46</sup> Internet Archive’s overlap analysis does not consider

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<sup>41</sup> Foster Report, ¶ 134. *See, e.g.*, Open Libraries, “Join Open Libraries.” (<http://openlibraries.online/join/>, viewed on April 28, 2022), (“Join Open Libraries[.] Libraries that are interested in lending digital books to their patrons should join Open Libraries and contribute to the community of practice we are building together. By joining Open Libraries, libraries can identify the overlap in their physical holdings with our digital holdings and provide free digital books to patrons where there are matches. Additionally, libraries can add their holdings into Open Libraries to increase lending counts. Leading public, academic, and special libraries have already signed on and are lending copies through Open Libraries today.”).

<sup>42</sup> Foster Report, ¶ 135. *See, e.g.*, Freeland Deposition pp. 46-47, 51:21-52:22, 92-93 (When “a library is interested in becoming a partner with Open Libraries, we run an overlap analysis that compares their physical holdings with our digital holdings.”) Editions of a particular work are identified by an ISBN. For each ISBN of a physical book from a partner library, Internet Archive compared it to ISBNs of the scans in their Free Ebook Website collection and increased its concurrent loan limit for the associated scan. Foster Report, ¶ 135.

<sup>43</sup> *See, e.g.*, INTARC00394741 (“The digitized versions are therefore made available to a single user at a time, while the physical book no longer circulates.”); Brewster Kahle, “Most 20th Century Books Unavailable to Internet Users – We Can Fix That,” July 1, 2019. (<http://blog.archive.org/2019/07/01/most-20th-century-books-unavailable-to-internet-users-we-can-fix-that/>), (“We believe every library can transform itself into a digital library. If you own the physical book, you can choose to circulate a digital version instead.”).

<sup>44</sup> “The maximum eligible concurrent loan limit is equal to one plus the number of partner libraries holding a book with the same ISBN.” Foster Report, ¶¶ 135-136. *See also*, Foster Report, ¶¶ 68-69.

<sup>45</sup> “In this way, IA considers a scan to be backed by multiple physical copies: the one that IA photographed and placed in storage, and one or more other different physical books with the same ISBN numbers purportedly maintained in the collections of partner libraries.” Foster Report, ¶ 136, 139.

<sup>46</sup> *See, e.g.*, INTARC00142659 (“Participating libraries ask, ‘Does that mean we have to control circulation for books in CDL?’ The answer is yes. Circulation control is an important aspect of our program. How you implement is a local library decision, and we don’t make local decisions. Let me give you some examples: some libraries only put materials into CDL that are inherently non-circulating, like materials in a reference collection, or special collections. Some libraries use CDL for materials in off-site storage, or closed branches, or as is the case today with many libraries, entire systems”).



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whether the physical book is still in use at the Partner Library.<sup>47</sup> As a result, its Open Library Program does not account for the possibility that the library’s physical copy is still in use by the library (including being read in the library or checked out by a library patron) at the same time that an IA user is borrowing a digital copy attributed to that physical book.<sup>48,49</sup>

19. IA’s Open Libraries Program is still in place<sup>50</sup> and has considerably increased the number of concurrent copies of titles on IA’s Free Ebook Website.<sup>51</sup> Internet Archive markets the Open Libraries program to libraries as a tool to “mak[e] every library’s collection into a digital collection by allowing a library to lend a digital version of physical volumes they own”<sup>52</sup>

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<sup>47</sup> See, e.g., Freeland Deposition p.62:16-20 (“[w]e depend on our partners for verifying the data” and agreeing that IA does not “place any requirements on them to -- to physically check that each of the books are -- exist in their -- in their system”).

<sup>48</sup> See, e.g., Agreement to participate in Open Libraries (INTARC00151363: Internet Archive, “Agreement to participate in Open Libraries.” ([https://docs.google.com/forms/d/e/1FAIpQLSc\\_8y\\_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwpbjmDxYrOnQ/vi](https://docs.google.com/forms/d/e/1FAIpQLSc_8y_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwpbjmDxYrOnQ/vi) ewform, viewed on April 28, 2022); Freeland Deposition, pp. 114:8-115:6 (“Q . . . given the importance of the one-to-one ratio in controlled digital lending, [wouldn’t] you [] want to know whether libraries have the books on offsite storage or whether they’re still on the shelves in the library? A We don’t know where libraries store their books. Q And you don’t do anything to require them to store them in one way or another, do you? No, that’s a local library decision. [ . . . ] Q Internet Archive doesn’t dictate or control or require libraries to comply with controlled digital lending in a specific manner, does it? Q No.”); *id.* pp. 171:6-172:16 (acknowledging that even if a library only added noncirculating materials to CDL for lending through IA, if that library allowed a patron in the physical library to review the book in the building, “then a patron at that library could be reading the book at the same time that book was checked out from archive.org” and agreeing that “Internet Archive would have no way of knowing that was happening”); INTARC439228 (in response to question from librarian about whether a loan on Open Library “show[s] up on our ILS [Integrated Library System], or is this simply indicated over on the Internet Archive site?” explaining that the Open Library “doesn’t interface with your ILS”). See also Foster Report, ¶ 141.

<sup>49</sup> Initially, the overlap analysis was only done quarterly or on an annual basis. See INTARC00439228 (in response to question from representative of the Delaware Library Consortium asking, “when we remove holdings from the database through our regular discard process, how do we notify that we no longer have access to the title?” Chris Freeland answers, “We do quarterly or annual updates, depending on the libraries’ preference, and that’s how we pick up discards.”); Freeland Deposition, pp. 105:24-106:16 (explaining that IA would often only perform “annual” updates, and only recently has begun to engage in “monthly updates now”). See also Foster Report at ¶ 141 (“To take into account a partner library’s lending to its own patrons, IA would need to run overlap analyses in tight synchronization with the library’s activities [ . . . ] in practice, IA generally runs overlap analyses monthly (since late 2020), and it is relatively rare for a partner library to provide IA with updates to its holdings list.”).

<sup>50</sup> See list of participating Partner Libraries: Internet Archive, “Open Libraries.” (<https://archive.org/details/openlibraries>, viewed on April 21, 2022.)

<sup>51</sup> See, e.g., INTARC00142801 (reflecting that, with 81 libraries participating in the matching card catalog Open Libraries program, IA has added 2.8 million copies of books to Open Library).

<sup>52</sup> Agreement to participate in Open Libraries (INTARC00151363): Internet Archive, “Agreement to participate in Open Libraries.” ([https://docs.google.com/forms/d/e/1FAIpQLSc\\_8y\\_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwpbjmDxYrOnQ/vi](https://docs.google.com/forms/d/e/1FAIpQLSc_8y_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwpbjmDxYrOnQ/vi) ewform, viewed on April 28, 2022.)



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rather than purchasing ebooks or additional print books.”<sup>53</sup> IA does not limit the use of these “concurrent copies” to borrowing by the patrons of the participating partner library.

### 3. *National Emergency Library*

20. During a period of about three months at the beginning of the COVID-19 pandemic, namely from around March 24 until June 16, 2020,<sup>54,55</sup> Internet Archive abandoned the “1:1 ‘owned to loan ratio’” and stopped restricting the number of ‘loans’ of in-copyright works. Internet Archive personnel have described this method as “suspending waitlists.”<sup>56,57</sup> Internet Archive referred to this as the “National Emergency Library” (“NEL”).<sup>58</sup>

### C. Recent growth of Internet Archive’s challenged conduct

21. IA has experienced considerable growth in recent years.<sup>59</sup> The National Emergency Library brought in “a huge influx of new readers” by making “1.4 million books much more available to readers.”<sup>60</sup> Currently, IA scans approximately 3,000 books a day<sup>61</sup> and has approximately 2 million in-copyright ebooks on its Free Ebook Website<sup>62</sup> out of a total of over 3 million ebooks.<sup>63</sup> Users borrow 70,000 books per day from the Free Ebook Website,

<sup>53</sup> IA tells libraries that its Open Libraries Program “ensures that a library will not have to repurchase the same content repeatedly simply because of a change in format.” INTARC00354190.

<sup>54</sup> Internet Archive, “Announcing a National Emergency Library to Provide Digitized Books to Students and the Public,” March 24, 2020. (<https://blog.archive.org/2020/03/24/announcing-a-national-emergency-library-to-provide-digitized-books-to-students-and-the-public/>.)

<sup>55</sup> Foster Report, ¶ 79.

<sup>56</sup> Freeland Deposition, pp. 220-23 (explaining the genesis of the National Emergency Library, where IA “suspend[ed] wait lists for the books at archive.org” and that IA put in place a maximum limit where up to 10,000 concurrent users could access a book).

<sup>57</sup> The absence of waitlists appears to have begun at an earlier date (March 17, 2020). Foster Report, ¶ 79.

<sup>58</sup> Foster Report, ¶¶ 24 and 78.

<sup>59</sup> Foster Report at ¶ 24 (“The size of the inlibrary collection has grown significantly within the past few years.”).

<sup>60</sup> See, e.g., INTARC00376651; Internet Archive, “Announcing a National Emergency Library to Provide Digitized Books to Students and the Public,” March 24, 2020. (<https://blog.archive.org/2020/03/24/announcing-a-national-emergency-library-to-provide-digitized-books-to-students-and-the-public/>), (explaining that “[t]his was our dream for the original Internet coming to life: the Library at everyone’s fingertips”).

<sup>61</sup> Mills Deposition, p. 128:13-19.

<sup>62</sup> See Deposition Testimony of Brewster Kahle taken December 9, 2021 (“Kahle Deposition”), p. 66:20-21.

<sup>63</sup> Mills Deposition, pp. 61:11-62:11; 70:2-71:12; 185:4-5 (testifying that Internet Archive has ... nearly 3 million books in its “Books to Borrow” collection, and that it has “digitized millions of [] modern books” and has the

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which corresponds to a total of 25 million borrowed annually.<sup>64</sup> Current user registrations reflect considerable growth since 2015;<sup>65</sup> for example, monthly registrations increased three-fold from approximately 17,000 in May 2016 to 53,000 in May 2019 and in February 2021 were nearly 70,000.<sup>66</sup> As of December 2021, the Open Libraries program alone added nearly 3 million copies of books available for simultaneous lending.<sup>67</sup>

22. IA plans to continue such growth. For example, Internet Archive proclaimed its desire to build “a collaborative digital collection of 10 million books.”<sup>68</sup> Internet Archive has also made statement that its ultimate intent is to be a modern-day digital version of the Library of Alexandria (describing a universal repository of all books)<sup>69</sup> or to provide “digital delivery of 80% of the average library’s collection by 2023.”<sup>70</sup>

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“current capacity” to digitize 1 million books per year); Foster Report, ¶ 27 (reflecting 3,211,204 items in collection as of February 21, 2022).

<sup>64</sup> Cheng Declaration, ¶ 40; Cheng Declaration, ¶ 38 (reflecting statistics for “attempted PDF or ePub downloads per day”); *id.* ¶ 41 (“Approximately 70,000 borrow events take place each day across all books.”); Kahle Deposition, p. 35:17-19. 25 million is calculated as 70,000 times 365.

<sup>65</sup> *See e.g.*, INTARC00151738 (Open Library “Stats” page reflecting, as of date reviewed in February 2021, nearly 70K new members over the last 28 days); INTARC00152104 (chart reflecting daily active users on archive.org (not including the Wayback Machine) from 2015 to 2018).

<sup>66</sup> INTARC00152126.

<sup>67</sup> *See, e.g.*, INTARC00142801 (reflecting that, with 81 libraries participating in the matching card catalog Open Libraries program, IA has added 2.8 million copies of books to Open Library).

<sup>68</sup> *See, e.g.*, PLAINTIFFS0000857.

<sup>69</sup> *See, e.g.*, PLAINTIFFS0000857 (“We all want to see the modern day Library of Alexandria, a digital library where the published works of humankind – all the books, music, video, webpages, and software – are available to anyone curious enough to want to access them. I believe now is the time to build it” and explaining that IA’s goal is “bringing universal access to all books”); INTARC00395793 (B. Kahle further pursues acquisition of Better World Books after being told “[t]his is a philanthropic private equity investment that could return \$10 Million per year of profits to be redeployed into the Archive’s mission by leveraging Archive’s SEO strength and user base to build the bookselling business that builds the library of Alexandria.”)

<sup>70</sup> *See, e.g.*, Internet Archive’s 2017 Submission to the MacArthur Foundation’s \$100million *100&Change* competition (INTARC00151083) (“The Internet Archive will help to transform the US library system by providing digital delivery of 80% of the average library’s collection by 2023”).

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### III. ECONOMICS OF COPYRIGHT PROTECTION FOR CREATIVE WORKS

#### A. Incentives to create and benefits of copyright protection

23. The United States Constitution grants Congress the power “to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries,” which is the basis for current laws protecting intellectual property.<sup>71</sup> The laws of this country reflect a widespread and longstanding recognition among academics and policymakers that economic incentives are essential in encouraging the long-run viability of an artistic community and ongoing creation of new artistic works, including books, music, film and art, as I discuss below

24. Economists recognize that copyright protection is “an incentive mechanism that is designed to encourage creative activities, and to ensure that the outputs of creative activities are able to be efficiently transacted in standard market environments, so that they may, in the end, be enjoyed by consumers.”<sup>72</sup> Properly enforced copyright laws encourage the creation of original and novel artistic works, to the benefit of society in general.<sup>73</sup> If we wish authors to write books, they need incentives to do so, such as the opportunity to make a living as an author. Similarly, publishers need incentives to efficiently produce and distribute print and ebook versions of the authors’ work, at prices and terms and conditions that are determined by consumer demand and supply. Although copyright protection is an exclusive right, this right is limited in time.<sup>74</sup> Properly conceived copyright laws not only provide incentives to create but also incentives to invest in all aspects of the production of books for public consumption, including investments in

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<sup>71</sup> U.S. Const., art. I, § 8, cl. 8.

<sup>72</sup> Watt, Richard, *Handbook on the economics of copyright: a guide for students and teachers*, (2014), Edward Elgar Publishing (“Watt (2014)”), p. 1.

<sup>73</sup> “A properly enforced copyright law is beneficial to society in general, since it helps valuable works of authorship to come into existence.” (Watt (2014), p. 13)

<sup>74</sup> “As a general rule, for works created after January 1, 1978, copyright protection lasts for the life of the author plus an additional 70 years.” U.S. Copyright Office, “How Long Does Copyright Protection Last?” (<https://www.copyright.gov/help/faq/faq-duration.html#duration>, viewed on April 20, 2022.)

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the discovery and support of new and emerging authors and in innovative new technologies, such as the digital delivery of books.<sup>75</sup>

25. Incentives embodied in intellectual property rights, include, among other things, the right to determine: whether to offer or exclude the work from the public (including *e.g.* territory-based restrictions); the format in which creative works are offered to the public (*e.g.* digital or physical); whether to license or sell creative works; the price to charge and whether to offer the work at a discount or for free; and what restrictions to impose (if any) on reproduction, sharing, and distribution of the work. It is important to note that both the price and the exact terms and conditions of use are elements of a “pricing strategy,” which are concurrently determined by rightsholders. Consequently, the price reflects the terms of sale or licensing that rightsholders can offer. The pricing strategy is at the discretion of the rightsholder (*i.e.*, the rightsholder has the discretion to determine the whole pricing strategy, not just the price), thereby allowing the consideration of any number of factors.

**B. A new competing product that is free displaces sales of the positive-priced substitute**

26. Economic theory tells us that consumers derive some level of utility from the products and services they consume, but the amount of consumption is constrained by consumers’ budgets.<sup>76</sup> Consequently, when a free (“zero-priced”) competing product enters the market, economists generally expect to observe a shift in consumer demand toward the free good and thus a downward shift in demand for existing goods.<sup>77,78</sup> This is because consuming the

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<sup>75</sup> Zentner, Alejandro, “Measuring the Effect of File Sharing on Music Purchases,” *Journal of Law and Economics*, Vol. 49, No. 1, (April, 2006), 63-90. “Weak property rights may lead to low levels of creation of artistic work or innovation.” (p. 65)

<sup>76</sup> See *e.g.* Nicholson, W., and Snyder, C., *Microeconomic theory: Basic principles and extensions*, 11th ed. (2008), Mason, Ohio: Thomson/South-Western (“Nicholson and Snyder (2008)”), Chapter 4, pp. 117-136, 152.

<sup>77</sup> Baye, Michael and Jeff Prince, *Managerial Economics and Business Strategy*, 10th ed. (2020), Berkshire: McGraw-Hill Education (“Baye and Prince”), p. 44. “Changes in the prices of related goods generally shift the demand curve for a good. For example, if the price of a Coke increases, most consumers will begin to substitute Pepsi because the relative price of Coke is higher than before. As more and more consumers substitute Pepsi for Coke, the quantity of Pepsi demanded at each price will tend to increase. In effect, an increase in the price of Coke increases the demand for Pepsi. This is illustrated by a shift in the demand for Pepsi to the right. Goods that interact in this way are known as substitutes.”

<sup>78</sup> See also Restivo-Alessi Deposition, p. 61 (“free always beats paid in terms of consumer demand. So free will impact the demand for paid content. . . . That's just obvious.”)

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lower-priced product requires a smaller budget allocation, which allows for greater overall consumption and thus higher utility.

27. Economic theory also tells us that the shift in consumer demand from the more-expensive to the free product will be determined by consumers’ perceptions of the degree of substitutability (*i.e.*, similarity) between the higher-priced product and the free product.<sup>79</sup> Products that have some degree of substitutability are referred to as “differentiated” products (*e.g.*, different brands of clothes), and some consumers may prefer to purchase one product over another, even when products are equally priced, because there are other factors besides price that consumers care about.<sup>80,81</sup> Consider one of the well-established models in economics, where each firm selects a price and is ready to meet all the demand for its product at that price, a setting that is analogous to the price component of rightsholders’ pricing strategies for ebooks.<sup>82</sup> On one extreme, if two products are highly differentiated, the demand for the higher-priced and higher-quality incumbent may be little affected by the presence of a zero-price alternative.<sup>83</sup> On another

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<sup>79</sup> Economists refer to this relationship as the ‘cross-price elasticity of demand,’ which for substitute goods is always positive by definition. *See e.g.* Nicholson and Snyder (2008). Cross-price elasticity of demand “measures the proportionate change in the quantity of *x* demanded in response to a proportionate change in the price of some other good” (p. 163) Substitutes are defined as “two goods such that if the price of one increases, more of the other good will be demanded.” (pp. 744-745)

<sup>80</sup> “Products A and B are differentiated if there is some price at which some consumers prefer to purchase A and others prefer to purchase B. The notion of product differentiation captures the idea that consumers make choices among competing products on the basis of factors other than just price. Chicago apparel retailing offers a good example. Different women tend to frequent different clothing stores, based on factors such as location and style. Unlike under perfect competition, where products are homogeneous, a differentiated seller that raises its price will not lose all its customers.” Besanko, D., Dranove, D., Shanley, M. and Schaefer, S., *Economics of Strategy*, 7th ed. (2016), John Wiley & Sons (“Besanko, et al. (2016)”), p. 168.

<sup>81</sup> Economists refer to products as “horizontally differentiated” if there are no unambiguous differences in quality that all consumers agree on; when one product is unambiguously of better quality, all consumers value it more, but may disagree how much they are willing to pay for it, which is referred to as “vertical differentiation.” Besanko, et al. (2016), p. 168.

<sup>82</sup> The Bertrand model of competition. *See* Baye M, Prince J. *Managerial economics and business strategy* (10<sup>th</sup> ed.). Berkshire: McGraw-Hill Education. 2020, pp. 292-294, 305; Besanko, D., Dranove, D., Shanley, M. and Schaefer, S., *Economics of strategy* (7<sup>th</sup> ed.) John Wiley & Sons, 2016, p. 175-177

<sup>83</sup> When firms produce slightly differentiated products, “one firm cannot capture all of its rival’s customers by undercutting the rival’s price; some consumers will have a preference for a firm’s product even if the rival is charging a lower price. Thus, even if firm 2 were to ‘give its products away for free’ (charge a zero price), firm 1 generally would find it profitable to charge a positive price.” Baye and Prince (2020), p. 305.

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extreme, if two products are identical, when a zero-priced competing product enters the market, it displaces *all* of the demand for the higher-priced product.<sup>84,85</sup>

28. The introduction of a zero-priced substitute of the sort effected by IA is more consistent with limited, rather than high, product differentiation.<sup>86</sup> Therefore, it likely displaces legal sales. Moreover, economists also expect to observe a downward competitive pressure on the price that the incumbent producer charges for their higher-priced product, sometimes even characterized as a “price war.”<sup>87</sup>

### C. Harm from copyright infringement

29. It is widely acknowledged that there are benefits to copyright protection, and conversely, it’s widely acknowledged that copyright infringement hurts the rightsholders by reducing their ability to make money from their creative works.<sup>88</sup> The advent of digital distribution of creative content (*e.g.*, books, music, and movies) has also elevated the importance of copyright protection relative to the pre-digital era.<sup>89</sup> The digital format is not constrained by

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<sup>84</sup> See Baye and Prince (2020), p. 292, explaining that in the Bertrand model where “consumers have perfect information, and zero transaction costs, and ... the products are identical, all consumers will purchase from the firm charging the lowest price. For concreteness, suppose firm 1 charges the monopoly price. By slightly undercutting this price, firm 2 would capture the entire market and make positive profits, while firm 1 would sell nothing. Therefore, firm 1 would retaliate by undercutting firm 2’s lower price, thus recapturing the entire market.”

<sup>85</sup> “In Bertrand’s model with firms producing identical products, rivalry between two firms results in the perfectly competitive outcome. When firms’ products are differentiated, as in monopolistic competition, price competition is less intense.” Besanko, et al. (2016), pp. 175-177, 179-180.

<sup>86</sup> As I discussed earlier: IA’s scans have the same content as the titles sold by the publishers. (Foster Report, ¶¶ 93 - 101.) IA describes their scans as “High Quality Page Images,” (INTARC00169341; INTARC00138760.) Plaintiffs’ deposition witnesses have explained that the quality of IA’s scans “[is] not as good as an eBook that we would put out, but I think it’s probably good enough for those who are willing to make the tradeoff and get something for free that they could have otherwise paid for.” Weber Deposition, pp. 215, 17-21.

<sup>87</sup> See Besanko, et al. (2016), pp. 203-205; Baye and Prince (2020), pp. 292-294.

<sup>88</sup> See, *e.g.*, Reimers, Imke, “Can Private Copyright Protection Be Effective? Evidence from Book Publishing,” *Journal of Law and Economics*, Vol. 59 (May 2016), pp. 411 - 440 (“Reimers (2016)”), at 412; Danaher, Smith, and Telang (2020), p. 3; Watt (2014), p. 13; Liebowitz (2014) p. 238; Novos, Ian E. and Michael Waldman, “The Effects of Increased Copyright Protection: An Analytic Approach,” *Journal of Political Economy*, April 1984, Vol. 92, No. 2 (April, 1984), pp. 236 - 246 (“Novos and Waldman (1984)”), at 237-238.

<sup>89</sup> Danaher, Brett and Smith, Michael D. and Telang, Rahul, “Piracy Landscape Study: Analysis of Existing and Emerging Research Relevant to Intellectual Property Rights (IPR) Enforcement of Commercial-Scale Piracy,” USPTO Economic Working Paper No. 2020-02 (April 2020), (“Danaher, et al. (2020)”). “Because Internet-based piracy of digital goods is unrestrained by physical media or distance, it is significantly more widespread than physical piracy and significantly more difficult to combat. As a result, theory suggests that Internet piracy could be vastly more disruptive to legal markets for creative works than prior forms of physical piracy.”



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distance or the need to have complementary physical goods (e.g., paper, CDs, DVDs). Consequently, digital copies of creative works are costless (or nearly so) to reproduce and widely share or distribute. In the case of books, an original, unprotected digital book file can be distributed instantaneously, an unlimited number of times, at zero or near zero cost of distribution, and to a worldwide audience. It has a very long lifespan because the digital format does not physically degrade.<sup>90</sup> The U.S. Congressional Budget Office recognized harm from copyright infringement of digital media products as early as 2004, saying that “[t]o the extent that [digital] piracy reduces copyright owners’ revenues and hence the future supply of creative works, society in general would also be harmed.”<sup>91</sup>

30. Unauthorized digital copies harm rightsholders by reducing their ability to make money from their creative works. This is because infringed versions of products that are distributed free of charge on the Internet often substitute for the purchases of an original product, commonly referred to as the “substitution,” “displacement,” or “cannibalization” effect.<sup>92</sup> Generally, the consequence of an illegal copy being offered is “typically one less potential sale of a legal copy,” leading to a reduction in quality and variety of original works, which economists refer to as “underproduction loss.”<sup>93</sup> Although some have argued that a “discovery” effect may in theory taper the reduction in sales that is due to copyright infringement,<sup>94</sup> it is now

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<sup>90</sup> None of these characteristics apply to a print book. For example, print books must be picked up or shipped, requiring time and money. Library patrons must travel to the local library to take out and return a book, which must be processed for re-circulation. The physical characteristics of print books necessarily limit the geographical scope and magnitude of their distribution. Print books also have a finite lifespan due to wear and tear.

<sup>91</sup> Congressional Budget Office, “Copyright Issues in Digital Media,” August, 2004. (<https://www.cbo.gov/publication/15911>), p. 28.

<sup>92</sup> See, e.g., Reimers (2016), pp. 412-413, 431; Liebowitz, Stan J., The impacts of internet piracy, Chapters, in: Richard Watt (ed.), Handbook on the Economics of Copyright, chapter 13, pages 225-240, Edward Elgar Publishing (2014) (“Liebowitz (2014)”).

<sup>93</sup> Watt (2014) p. 26.

<sup>94</sup> Some have provided a theoretical argument, which is unsubstantiated by any real-world studies of copyright infringement across most markets including books, that availability of free pirated copies of creative works on the Internet may allow a consumer to discover the author and then induce the consumer to purchase works by the author that the consumer may not have otherwise purchased, also referred to as “sampling,” or “promotional” effect. See Reimers (2016), p.431: “piracy affects legal sales through two counteracting channels. The illegal versions can steer consumers away from legal options (displacement effect), but the consumer may also be more likely to hear about a product if free versions are more readily available, which potentially increases legal sales promotional effect.” See also the discussion in Liebowitz (2014), pp.225-239. Critically, “some factor must keep the individual from just continuing to use the pirated version” of the other works by the author that the consumer discovered, and the

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widely established in the academic literature, which I discuss below, that copyright infringement generally, on net, harms rights holders by displacing sales.

31. Moreover, the argument about the “discovery” effect of copyright infringement presumes that the market for the infringed works is somehow dysfunctional. In other words, the argument that rightsholders choose not to capitalize on the additional profit that is possible as a result of distributing additional copies of creative content for free implies that rightsholders are not acting in their best interest. There is no evidence to support such a conclusion; to the contrary, library lending volumes, publisher sales, and readership<sup>95</sup> suggest that the market is well-functioning.<sup>96</sup> I assume that market participants (*e.g.*, authors, publishers, distributors, libraries, ebook aggregators, and consumers, including library patrons) are well-informed and acting in their best interest; I see no evidence to suggest some form of market failure exists. Experimentation with different contract types also supports this assumption.<sup>97</sup>

32. There is substantial evidence, based on numerous empirical studies, that availability and sharing of unauthorized media files displaced legitimate sales, which in turn reduced the revenues paid to and profits earned by the rightsholders of those creative works. For example, a recent survey of the economic literature on unauthorized distribution in the music, television, books, and movie markets, by Danaher, Smith, and Telang (2020), reports that 29 out of 33 peer-reviewed papers and journal articles they reviewed find that sharing of unauthorized media causes significant harm to legal media sales.<sup>98</sup> The vast majority of economic studies that

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consumer has to be induced to purchase them instead. (p. 225). This is likely less relevant in for one-time consumption goods, such as movies, when compared to *e.g.* music. (pp. 225-226).

<sup>95</sup> See the summary of opinions.

<sup>96</sup> I also note that Google and other entities offer consumers the opportunity to sample the works without buying or borrowing (from a library). *See, e.g.*, Google Books, “The Catcher in the Rye.” ([https://www.google.com/books/edition/The\\_Catcher\\_in\\_the\\_Rye/FqSiDwAAQBAJ?hl=en&gbpv=0](https://www.google.com/books/edition/The_Catcher_in_the_Rye/FqSiDwAAQBAJ?hl=en&gbpv=0), viewed on April 28, 2022.). *See also* Deposition Testimony of Alan Pavese taken December 10, 2021 (“Pavese Deposition”), p. 69 (explaining that publishers make “passages” of books available “for free for marketing purposes” in order to “engage consumers and try and promote their interest in reading the full book”).

<sup>97</sup> I further discuss this evidence in Section IV.B.

<sup>98</sup> Danaher, et al. (2020). “The 29 papers finding evidence of harm from piracy ... have considered physical CDs, DVDs, and Blu-ray discs sales; legal digital downloads; paid video streaming services; and the theatrical box office. There is also an emerging academic literature that these reduced financial incentives lead to a reduction in investment and overall creative output.” (p. 3).



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have looked at the impact of infringement of digital works have done so by analyzing the music and movie markets. In a survey of the music infringement literature, Liebowitz (2014) standardized metrics of the impact of unauthorized distribution on the sound recording industry from twelve peer-reviewed articles, concluding that most (50 percent to 70 percent) of the decline in sales from 1999 to 2011 is attributable to unauthorized sales.<sup>99</sup> Empirical studies of movie infringement find a negative impact on box office receipts, prerecorded video sales/rentals, or both, as documented by Liebowitz (2014) and Reimers (2016).<sup>100,101</sup>

33. Digital copyright infringement also reduces economic incentives for investment in creative output.<sup>102</sup> In addition to the direct lost revenue impact discussed above, unauthorized distribution of copies also adversely impacts the profitability of legal distribution and, consequently, deters further investment and innovation by artists and other content producers.<sup>103</sup>

34. Publishers claim to be losing around \$300 million per year to unauthorized scans and other unauthorized distribution of their ebooks (a Bookexpo Survey from 2019 concluded that U.S. publishers lose \$300 million per year to ebook infringement<sup>104</sup> and the Nielsen Survey concluded \$315 million<sup>105</sup>). Publishers are concerned about displaced sales as a result of

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<sup>99</sup> Liebowitz (2014), p. 238.

<sup>100</sup> Liebowitz (2014). Of the seven studies discussed, four were published, in 2006 and 2007. Moreover, “there are good theoretical reasons to believe that the impact of piracy on the movie industry is likely to be more completely affected only by the negative substitution impact that was the case for music.” (p. 235).

<sup>101</sup> Reimers (2016). “Recent academic studies show that illegal distribution displaces legal sales in media industries” (p. 412) “While some early work indicates that there is no significant effect (Oberholzer-Gee and Strumpf 2007), most recent work finds that legal sales are significantly displaced by pirated versions (Zentner 2006; Rob and Waldfogel 2006; Liebowitz 2008; Waldfogel 2010; Danaher, Smith, and Telang 2015).” (p. 413).

<sup>102</sup> Senate Committee on the Judiciary, Written Testimony of Dr. Michael D. Smith, March 10, 2020 (“Smith Testimony”).

<sup>103</sup> United States Government Accountability Office, “GAO-10-423 - Intellectual Property: Observations on Efforts to Quantify the Economic Effects of Counterfeit and Pirated Goods,” April, 2010. (<https://www.gao.gov/products/gao-10-423>), pp. 11-12. See also Michael D Smith. “Piracy and the Supply of New Creative Works,” February 16, 2016. (<https://techpolicyinstitute.org/2016/02/16/piracy-and-the-supply-of-new-creative-works/>.)

<sup>104</sup> Forbes, “U.S. Publishers are Still Losing 300 Million Annually to Ebook Piracy.” (<https://www.forbes.com/sites/adamrowe1/2019/07/28/us-publishers-are-still-losing-300-million-annually-to-ebook-piracy/?sh=7db18565319e>, viewed on April 26, 2022.)

<sup>105</sup> PLAINTIFFS0000989 at 992.

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copyright infringement,<sup>106</sup> including in the academic book market.<sup>107</sup> Plaintiff Publishers have numerous ways to try to combat infringement, including employing external vendors and in-house staff.<sup>108</sup>

35. The academic literature examining the economic effects of free unauthorized digital books, as related to this matter, is limited. In fact, I am aware of only one study, published by Imke Reimers, that examines the economic effect of unauthorized digital copies on in-copyright books and their rightsholders.<sup>109</sup> In her 2016 study, Dr. Reimers concluded that widely-available, free unauthorized digital copies of books displaced publishers’ ebook sales, “the closest substitute.”<sup>110</sup> Reimers (2016) studied titles that were offered in electronic format by Rosetta Books and analyzed their authorized ebook and print book sales, before and after infringing digital copies were removed from the websites on which they were hosted or delisted in search engines.<sup>111</sup> Similar to IA, the infringing digitized book content in this study was primarily in HTML or pdf format, rather than ripped e-book files.<sup>112</sup> Reimers estimated the

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<sup>106</sup> See, e.g., Deposition Testimony of Alan Pavese taken December 10, 2021 (“Pavese Deposition”), pp. 46-48 (explaining “that we are seeing titles perform less well due to piracy”); *id.* pp. 46, 51-52 (explaining that the notion that unauthorized use “is depressing revenues” comes from “millennia of experience of stealing” and explaining that, “as a general concept, so we also have lots of industry data showing that there is hundreds of millions of dollars of impact to the publishing industry from pirated content and illicit markets that have . . . damaged publishers, authors, legitimately functioning aggregators”). See also Restivo-Alessi Deposition, pp 60-61 (“piracy has an impact on our sales, too. [] I’ve done tons of study in music, clearly, where piracy had a huge impact, and also in books.”)

<sup>107</sup> WILEY0011699 (Perelgo study addressing academic unauthorized use, concluding that “online textbook piracy is growing rapidly” and that “students are moving online for pirated free books.”).

<sup>108</sup> See, e.g., Pavese Deposition, p. 167 (explaining that Wiley has engaged in “an amazing amount of escalation” in its efforts against the unauthorized distribution of free copies, including investing \$10 million on its in-house team and contracts with third-parties). See also Deposition Testimony of Michael Gaudet taken November 8, 2021 (“Gaudet Deposition”), pp. 137-138 (with respect to Hachette, in addition to its anti-piracy vendor, explaining that “the whole company” is dedicated to preventing unauthorized sales and that “[a]t any given time, editors, legal resources, our IT team, our digital operations team, are keeping our ear to the ground trying to be attentive to the need to protect our content.”)

<sup>109</sup> Reimers (2016). The fact that this is the sole paper on the unauthorized distribution of books is also confirmed by Danaher et.al. (2020).

<sup>110</sup> Reimers (2016) p. 411 and 421 “Electronic books can be regarded as the closest substitutes for pirated versions”.

<sup>111</sup> Reimers (2016) p. 412. The time period considered in this study is 2010–2013. Pirated content was removed after takedown notices were sent to the websites on which they were hosted.

<sup>112</sup> Reimers (2016), p. 415. “Most book content (65 percent) is either in HTML or pdf format—formats that are easy to upload and download but can detract from the reading experience. Only 20 percent of the infringing content in my data set is clearly recognizable as being in an e-book format, perhaps because these formats have additional protection against copying (for example, DRM).”

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removal of infringing copies from the Internet increased sales of ebooks on average by at least 14 percent.<sup>113</sup>

36. In addition to its conclusion, there are a few things that are important to note about Dr. Reimers’ study of unauthorized book sales. First, Dr. Reimers considered a number of factors that could have affected ebook sales that were unrelated to the availability of infringing copies and incorporated some of these factors (*e.g.*, publication of a new edition of a title, price promotions) in her empirical analyses. Dr. Reimers’ efforts to distinguish between infringement-related factors affecting sales and other factors unrelated to infringement that may have affected sales allowed her to assume that her empirical model suggested causal relationships, as opposed to mere correlation.<sup>114</sup>

37. Second, in her 2016 study, Dr. Reimers conjectures that the impact of infringement depends on the “types of consumers that the work attracts” which relates to the popularity, quality, and genre of the title. For example, Dr. Reimers notes that “if a title has been well known for many years, it does not rely on an additional promotional effect of pirated versions.” Thus, she concludes that “for well-known and successful titles, book piracy mostly displaces sales of legal editions.”<sup>115</sup> In line with this conjecture, Dr. Reimers found that the effect of unauthorized sales on ebook sales of popular titles is larger than on more obscure titles, though the difference is not statistically significant. It is also noteworthy that she finds evidence of a net loss of sales even for the obscure titles, indicating that any discovery effect is more than offset by displacement.<sup>116</sup>

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<sup>113</sup> Reimers also concluded that sales of print books were not affected by the infringing conduct. She attributed this result to her notion that “electronic books can be regarded as the closest substitute for pirated versions” whereas “physical editions of a title ... are not necessarily close substitutes for free electronic versions of the same title.” Reimers (2016) p. 414 and 421. This notion is in contrast to Reimer’s analysis in her expert report, which only considers potential changes in print book sales and ignores potential changes in ebook sales as a result of Internet Archive’s infringing conduct.

<sup>114</sup> I discuss this in greater detail later, in the context of Dr. Reimers’ analysis of the impact of Internet Archive’s conduct on sales of print and ebooks by Plaintiff Publishers, where Dr. Reimers did not attempt to make sure that her results were valid, in a similar fashion.

<sup>115</sup> Reimers (2016) p. 431.

<sup>116</sup> Reimers (2016), pp. 431-433. For more obscure titles, Dr. Reimers conjectures that “a free pirated version of the book could spur demand for the title” and states that “my results support this idea in part,” although she ultimately concludes that “the displacement effect outweighs the promotional effect for all types of works.”

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38. A recent working paper on the Google Books Project by Nagaraj and Reimers (2021) claims to find a discovery effect from free distribution of digital book copies. Specifically, they find that the promotional effect of Google Book’s digitization of public domain (i.e., out-of-copyright) books enhances print book sales. I note that this finding is not relevant to the question of market harm that resulted from Internet Archive’s alleged infringement of Plaintiffs’ in-copyright works. Nagaraj and Reimers (2021) exclusively examined out-of-copyright works originally published between 1903 and 1922, a large portion of which “included less well-known and older books...that are of significant consumer interest but have become forgotten over time.”<sup>117</sup> Further, any instances of discovery were enhanced by the fact that Google Books was the first to launch a search function of this magnitude, having made the scans “searchable via optical character recognition (OCR) technology.”<sup>118</sup> In sum, the circumstances analyzed by Nagaraj and Reimers (2021) are very different, and their conclusion does not generalize to the conditions in this litigation.

#### **IV. MARKET FOR BOOKS**

39. In this section I discuss aspects of the book market that are relevant to my opinions in this case.

##### **A. Overview of the market structure**

40. Authors write books. Publishers provide a range of services to help authors’ creative works reach consumers and undertake substantial financial risks through advance financing of book projects of unknown future success.<sup>119</sup> Authors often grant publishers an exclusive license to publish their works in various forms.

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<sup>117</sup> Nagaraj, Abhishek and Reimers, Imke, “Digitization and the Demand for Physical Works: Evidence from the Google Books Project,” SSRN Working Paper (April 12, 2021) (Nagaraj and Reimers (2021)), p.3.

<sup>118</sup> Nagaraj and Reimers (2021), p. 4 (“The digitization effort at Harvard only included out of copyright works, which . . . were made available to consumers in their entirety. This allows us to fairly assess the tradeoff between cannibalization (by a close substitute) and discovery (through search technology”). Notably, the authors concluded that, even for public domain works, the “positive effects” of digitization “disappear for more popular books” and further that where professors already had access to alternative discovery mechanisms through Harvard library services, “digitization reduces rather than increases demand, measured as loans within Harvard” (p. 5).

<sup>119</sup> Deposition Testimony of Steve Potash taken January 31, 2022 (“Potash Deposition”), pp. 146:14-20 (“Authors, publishers have significant investment in each title they produce and bring to market. . .”); The Authors Guild,

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41. Advance financing that publishers provide covers author advances, editing, marketing, and format-specific distribution costs, discussed below. Publishers’ editing services range from book structure and line editing, to copy editing; publishers’ art and design departments create book covers and page designs; publishers’ marketing services include author tours, advertisements (in print and online), social media campaigns, and promotions.<sup>120</sup> Publishers operate warehouses and also incur printing, binding, and shipping costs.<sup>121</sup> Publishers also invest in the development of new technologies and formats, including ebooks.<sup>122</sup> In the case of ebooks, publishers also prepare the digital files, and are responsible for protection of authors’ intellectual property, including through the application of the DRM software to prevent copying

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“Everything You Need to Know About Book Advances,” July 20, 2021. (<https://www.authorsguild.org/industry-advocacy/everything-you-need-to-know-about-book-advances/>.)

<sup>120</sup> See, e.g., Deposition Testimony of Ben Sevier taken November 4, 2021 (“Sevier Deposition”), pp. 45-48 (describing in great detail the myriad of “costs that are incurred getting a book to market” including the cost of acquiring the book in the first place from the author and paying a royalty, the overhead costs associated with the work done on the manuscript, marketing for the book, costs of touring the author, preparing the title for physical printing, freelance costs for the production and proofreading, the cost of buying paper to deliver to the printer, and the interior designer who “has to lay out and design every page of the book and make sure that everything is perfect” among many other categories of costs.)

<sup>121</sup> See, e.g., PRH0072194; HACHETTE0012377; HACHETTE0012376; HC0036462; HC0036463; WILEY0011723 (company-wide revenue and costs spreadsheets produced by each Plaintiff Publisher reflecting significant expenditures on costs including supplies, freight & delivery, repairs & maintenance, utilities, and more).

<sup>122</sup> When it was a relatively new technology, publishers invested in the development of ebooks, along with other market participants. See, e.g., *Random House, Inc. v. Rosetta Books LLC and Arthur M. Klebanoff*, United States Southern District of New York, Case No. 2001-1728, Affidavit of Richard Sarnoff dated February 26, 2001 (“Sarnoff Affidavit”), ¶ 18. (“Random House has invested more than \$5 million into the development of eBook publishing programs including investments in eBook hardware and software, human resources, consultants and digital conversion of titles, and anticipates investing approximately \$10 million in the next 3 to 5 years, based on its belief that eBooks will someday become a book format of choice for a significant segment of the book consuming public.”); Sarah Glazer, “An Idea Whose Time Has Come Back,” December 5, 2004. (<https://www.nytimes.com/2004/12/05/books/review/an-idea-whose-time-has-come-back.html>); Jennifer Harlan, “A Brief History of Summer Reading,” July 31, 2021. (<https://www.nytimes.com/2021/07/31/books/a-brief-history-of-summer-reading.html>.)

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or unauthorized sales.<sup>123</sup> Publishers produce books in a variety of formats—print, audio and ebooks.<sup>124</sup> Even within these formats, there are further distinctions.<sup>125</sup>

42. The numerous formats developed by the publishing industry reflect the range of readers’ preferences. For example, when comparing print and digital books, some readers may prefer print books for aesthetic reasons and/or for the ability to share books with other readers. Other readers may be more influenced by factors such as durability, ease of reading, and impact on the environment in their choice of hardcover, paperback, or ebooks (which also require an investment into an e-reader).<sup>126</sup> Economic theory would predict that consumers’ preferences across these many factors result in a preference ordering across different formats, including the possibility of indifference across two or more. Generally speaking, preferences (and therefore substitutability across formats) vary across individuals and may also vary over time. Because

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<sup>123</sup> See, e.g., HACHETTE0003138 (DRM requirements for new aggregator); See also, Restivo-Alessi Deposition, pp. 242-243 (explaining that HarperCollins requires its aggregators to utilize significant DRM protections, explaining that “we basically put the [] solidity and the type of the DRM through the ringers, and then we also check that their entire platforms, so not just the files are protected, but their whole, you know, platform. And if there's a reader involved, the reader [] is checked as well for security”); *id* at 89 (describing efforts against the unauthorized distribution of free copies within HarperCollins’ legal department); See also, PRH0027763 (DRM compliance checklist).

<sup>124</sup> Publishers have an opportunity to recover all costs, including investments, overhead, and other costs, through the sale of literary works regardless of the format. See, e.g., Weber Deposition, p. 33 (testifying that “There's very minimal costs to making an additional [ebook] copy, which is why you have to protect the format” and that “most of the costs in any book we look at as across all formats. So it’s hard to just say that there's a production cost for a specific format of the book because the real cost is in the entirety of the format”).

<sup>125</sup> For example, print books can be offered as hardcover, paperback, and mass-market paperback. See, e.g., Hachette Book Group, “The Catcher in the Rye by J.D. Salinger.” (<https://www.hachettebookgroup.com/titles/j-d-salinger/the-catcher-in-the-rye/9780316769174/>, viewed on April 28, 2022.) (listing trade paperback, hardcover, hardcover (large print), trade paperback, and mass market as print book options). Audiobooks can be offered either as CDs (physical audio books) or as digital audio books. See, e.g., Amazon, “Amazon Best Sellers.” (<https://www.amazon.com/Best-Sellers-Books-on-CD/zgbs/books/69724>, viewed on April 28, 2022), (reflecting sale of Books on CD); Audible, “Audiobooks are just the beginning.” ([https://www.audible.com/ep/audiobooks?ref=a\\_hp\\_t1\\_navTop\\_pl0cg0c0r0&pf\\_rd\\_p=5c0d7aaa-254f-4b79-8208-be137ad379e4&pf\\_rd\\_r=JNV2QZN3BRG1Z2R5S01X](https://www.audible.com/ep/audiobooks?ref=a_hp_t1_navTop_pl0cg0c0r0&pf_rd_p=5c0d7aaa-254f-4b79-8208-be137ad379e4&pf_rd_r=JNV2QZN3BRG1Z2R5S01X), viewed on April 28, 2022), (listing audiobooks offered by Audible to purchase and download to a digital device). Ebooks are generally published in EPUB format or using Amazon’s proprietary format, which can only be displayed through a Kindle device or application. See Amazon, “Kindle Store Terms of Use.” (<https://www.amazon.com/gp/help/customer/display.html?nodeId=201014950>, viewed on April 27, 2022.)

<sup>126</sup> Bookstr, “Pros and Cons of Every Book Format.” (<https://bookstr.com/list/pros-and-cons-of-every-book-format/>, viewed on April 20, 2022.)



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each format offers distinct advantages, disadvantages, and qualities that are idiosyncratic to each buyer, each format has different demand-side factors that increase or decrease sales.<sup>127</sup>

43. Books reach readers through different distribution channels (*e.g.*, libraries, schools, and retail), and each distribution channel serves multiple book formats—print, ebook, and audio. My analysis and opinions focus on the sale and licensing of print and ebook formats to the library and retail markets. There are other formats, including audiobooks, and other markets, such as schools, which are outside the scope of my analysis.<sup>128,129</sup>

44. Libraries are substantial customers of each of the Plaintiff Publishers.<sup>130</sup> For example, public libraries collectively spend over one billion dollars each year on print books, eBooks, and audiobooks, and may purchase/license different formats of the same work.<sup>131</sup> Libraries pay “library ebook fees” (for digital distribution rights for short term, library-style

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<sup>127</sup> Type of book format is one of many demand-side determinants of sales for a book title in a particular format.

<sup>128</sup> There is an established extensive market for schools that publishers serve, primarily with print books. School ebooks are a growing market, and includes Sora app, a school digital reading platform aimed at K-12 students that is offered by OverDrive, and which links to that student’s public library for additional access to library ebooks. *See, e.g.*, OverDrive Education, “Sora: The student reading app.” ([https://static.od-cdn.com/Sora\\_Brochure\\_6P\\_SinglePages.pdf](https://static.od-cdn.com/Sora_Brochure_6P_SinglePages.pdf), viewed on April 28, 2022.); *see also, e.g.*, Deposition Testimony of Skip Dye taken November 18, 2021 (“Dye Deposition”), pp. 247-48 (describing details and TOS for classroom set model, created just before COVID in February 2019, which is used “where all the classroom would be reading that same book” or that “in some cases, OverDrive will put together for a school system or a school, it may be grades three, four and five and they may be reading different books and stuff. So they would put them and aggregate them together.”).

<sup>129</sup> There is also an established market for audio books, which publishers distribute to the commercial retail market and through libraries. *See, e.g.*, Deposition Testimony of Josh Marwell taken December 3, 2021 (“Marwell Deposition,”) p. 100; Weber Deposition, p. 25; Deposition Testimony of Alison Lazarus taken November 12, 2021 (“Lazarus Deposition”), p. 59.

<sup>130</sup> *See, e.g.*, Spreadsheet produced by OverDrive, “1 & 2 - CONFIDENTIAL - Checkout Data.xlsx” (spreadsheet produced by OverDrive, one of the library ebook aggregators in the market, reporting that in 2020 it alone processed approximately [REDACTED] loans of ebooks to library patrons from all publishers); PRH0058941 (showing that between 2010 and mid-2021, Penguin Random House earned approximately [REDACTED] in net revenue from the sale of digital content (including ebooks and digital audio) in the library market); HACHETTE0002574 (showing that between 2017 and 2020, ebooks published by Hachette and licensed to libraries were checked out by patrons through library aggregator OverDrive over [REDACTED] times); HC0030132 (for the period between 2017 and 2020, HarperCollins earned [REDACTED] in revenue from ebooks in the library market).

<sup>131</sup> According to federal data collected by the Institute of Museum and Library Services – and cited extensively in the Reimers Report – public libraries spent almost \$1.5 billion on collection expenditures in FY 2019, amounting to approximately 690 million copies of print materials and 615 million ebooks. PLAINTIFFS0001005. That amounted to approximately 690 million copies of print materials and 615 million ebooks. PLAINTIFFS0001010.

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lending) for ebooks independent of any payment for a print book of the same title.<sup>132</sup> Consistent with rightsholders optimizing any “discovery effects,” libraries also increase awareness of individual book titles through newsletters, author talks, book groups, and librarian recommendations to patrons. In some instances, libraries collaborate with publishers and authors to promote certain works.<sup>133</sup>

45. Library ebook lending practices tend to be similar in some aspects to the lending of print books. Library patrons borrow an ebook for a finite period of time (*e.g.*, a two-week library loan). In addition, Plaintiff Publishers require that eligibility to borrow a particular library’s legal copy of an ebook is typically limited to the given library or library consortia’s patrons. For a public library, patrons are generally the area’s residents. For an academic library, patrons are typically students and faculty.<sup>134</sup> One important difference between print and ebook formats is that library patrons can borrow an ebook available through their local public library or academic library from anywhere—their home computer, mobile phone, ebook reader, etc.—without physically travelling to the physical library.

46. Library ebook aggregators, such as Overdrive, Hoopla, and EBSCO are distribution partners of publishers; they act as intermediaries between publishers and libraries in the ebook market and provide the necessary platform to host the digital works for lending. Libraries pay the library ebook aggregators for the ebook licenses, who in turn pay the publishers (after deducting their discount).<sup>135</sup>

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<sup>132</sup> See, *e.g.*, HC0010272 (reflecting distinct sales of library ebooks and library print books); Lazarus Deposition, p. 49 (“Internet Archive is creating an eBook from a print book, and those are two separate formats, two separate business models that we support for our authors and that we do not think of as one item that can be shared. There are two distinct ways of reading that we treat very separately”).

<sup>133</sup> See, *e.g.*, Weber Deposition, p. 214:20-24 (explaining that public libraries “support us” by conducting “advertising campaigns on our behalf. They do marketing with us. They do [] reads and community events.”). See also, Restivo-Alessi Deposition, pp. 34-35 (explaining that, unlike Internet Archive, “a library does a lot of marketing activities, both online and offline, with our offers to their patrons” including that libraries “have speaking events with our authors. They have book clubs. They have portals, where they promote books, and they also have email marketing campaigns to their patrons, where they highlight, you know, specific books to their -- to their patrons. And they’re actually an important part of how we create visibility for authors, not just new authors and frontlist titles, but also backlist titles, which are really important”).

<sup>134</sup> By contrast, Internet Archive distributes its digital books to users around the world.

<sup>135</sup> See, *e.g.*, OverDrive Digital Distribution Agreement September 2013 between OverDrive and HarperCollins (HC0011426); Wiley contracts with aggregators EBSCO and ProQuest (WILEY0011657; WILEY0011641).



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47. In the retail market, print books are sold at brick-and-mortar and online bookstores. Publishers sell these print books directly to bookstores or e-retailers (such as Barnes & Noble, or Amazon) or to wholesalers such as Ingram, that distribute to others including independent bookstores or to Big Box stores such as Costco.<sup>136</sup> Retail ebooks are distributed and sold through e-retailers, such as Amazon and BarnesandNoble.com.<sup>137</sup>

## **B. Market for the distribution and licensing of ebooks to libraries**

48. As discussed in Section III.C, digital book files have very different characteristics from print books, including their reproduction and distribution capabilities, which require limits and protections to preserve the economic incentives for rightsholders.<sup>138</sup> Ebooks’ different characteristics with respect to reproduction and distribution also correspond to different costs, investments, distribution channels, and expected sales, in contrast to print books.<sup>139</sup> Moreover, in the library market, ebooks are distributed through intermediaries—the library ebook aggregators such as EBSCO, Overdrive, and Hoopla—who receive a discount off of the Library Digital List Price. Because of these economic factors, among others, content owners have demonstrable economic and business reasons to offer different pricing strategies for ebooks (where as I discussed earlier, this includes both the prices charged and all the terms and conditions, and the prices offered by rightsholders reflect the terms of sale or license offered, including, at the discretion of the rightsholder, the consideration of any number of factors, such as the expected audience, audience size or the number of reads). Rightsholders should have the exclusive right to determine how all of these factors (including the different characteristics of print and digital

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<sup>136</sup> See. Marwell Deposition, p. 63 (providing “recap of the distribution channels” including mass retailers, specialty stores, chain bookstores, independent bookstores, wholesalers, and e-commerce). See also, Weber Deposition, pp. 24-27.

<sup>137</sup> See, e.g., Marwell Deposition, pp. 63-64.

<sup>138</sup> See Weber Deposition, pp. 132:23-133:5 (explaining that preserving “friction” is critical because allowing libraries “to buy one copy of an eBook and lend it out to as many people as they wanted simultaneously anywhere” would “basically mean[] there could be one copy purchased of a book by author A and literally the entire country could -- could read it simultaneously for the price of that one payment. So that's not sustainable.”). See also, Marwell Deposition, pp. 116-117 (“our eBook business model allows for one user at a time. So two people can't be reading an eBook at the same time. The eBook is a fabulous format. I mean, it -- you know, it -- it doesn't wear out. There's no friction. Conceivably, you know, one eBook could serve the entire world at the same time with simultaneous use and -- which is a bit of an existential threat to our author and their royalties and for publishers, who are the ones who are investing in authors to begin with.”).

<sup>139</sup> See the discussion of format-specific distribution costs in Section IV.A.

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books) and any other economic factors affect pricing strategies for print and ebooks (which may vary across market participants) based on valid economic reasons—in order to protect the rightsholders and to preserve their economic incentives to create original works.<sup>140</sup>

49. Consistent with the notion that digital products require different pricing strategies in light of the different characteristics of print versus digital, the terms governing commercial ebooks are different than print books. While retail print books can be re-sold, the terms governing retail ebooks essentially limit the ebook to one user account, on a limited number of devices.<sup>141</sup> Also consistent with economic theory, library ebook prices and license terms vary concurrently and differ from print books. The library ebook market has been active for more than a decade, with considerable lending volume.<sup>142</sup> Plaintiff Publishers have experimented with different licensing strategies, including price and other terms and conditions; I discuss the evolution of the library ebook market in greater detail below. Moreover, two of the Plaintiff Publishers have conducted limited studies suggesting that between 39-50% of all ebook “reads” in the U.S. (including retail ebook sales) are now library ebook reads.<sup>143</sup> In other words, the

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<sup>140</sup> This is not unique to ebooks. Books have long existed in multiple formats (hardcover/paperback/ebook/audio), each with a different price that reflects both supply-side costs of production and demand-side preferences across book readers. *See* catalogs produced by each publisher, reflecting a large volume of books published in different formats over a long period of time (HACHETTE0002576; HC0003508; PRH0068115; WILEY0011680); *See, e.g.*, Sarnoff Affidavit, ¶ 6. (“As a book publisher, Random House’s basic function is to present its authors’ works to the reading public in whatever “book forms” meet marketplace demand. Through the years, these “book forms” have evolved to include hardcover, trade paperback and mass market paperback editions. As technology has continued to evolve and be applied to the book publishing process, it has begun to be economically viable to deliver books to readers in electronic, versus paper, format.”).

<sup>141</sup> *See, e.g.*, Amazon, “Kindle Store Terms of Use.” (<https://www.amazon.com/gp/help/customer/display.html?nodeId=201014950>, viewed on April 27, 2022), (“Upon your download or access of Kindle Content and payment of any applicable fees (including applicable taxes), the Content Provider grants you a non-exclusive right to view, use, and display such Kindle Content an unlimited number of times (for Subscription Content, only as long as you remain an active member of the underlying membership or subscription program), solely through a Kindle Application or as otherwise permitted as part of the Service, solely on the number of Supported Devices specified in the Kindle Store, and solely for your personal, non-commercial use. Kindle Content is licensed, not sold, to you by the Content Provider.”).

<sup>142</sup> See the evidence discussed in the summary of opinions.

<sup>143</sup> For example, a Penguin Random House study of OverDrive circulation data for titles first published between January 2017 through August 2019 reflected that: for the life-to-date circulation, the total number of “grossed up” library checkouts was █████ (46% of all reads) and the total number of “non-grossed up” library checkouts was █████ (39% of all reads); during the month each title went on sale plus the next three months, “grossed up” library checkouts made up 28% of all reads and “non-grossed up” library checkouts made up 24% of all reads. PRH0072244. *See also* HACHETTE0010909 (“Since 2017, library sales have averaged 13% of [Hachette’s] total ebook revenue for selected titles, while on average, circulations account for 50% of the total ebook “reads” in this time for those titles.”).

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library ebook market delivers ebooks to millions of Americans for free and appears to be well-functioning.<sup>144</sup>

50. After the launch of the Amazon Kindle in 2007, and iPad iBooks in 2010, ebooks started to become mainstream, and retail ebook sales grew considerably.<sup>145</sup> With the launch of library ebook aggregators such as OverDrive,<sup>146</sup> libraries began to offer ebooks to many patrons who no longer needed to be physically present in the library,<sup>147</sup> and the number of potential library ebook reads increased.<sup>148</sup> Library ebook checkouts displace some retail ebook sales.<sup>149</sup> One objective in Plaintiffs’ development of library ebook pricing/licensing strategies has been to preserve the viability of both retail and library markets. For example, Penguin Random House, Hachette, and HarperCollins have repeatedly revised their pricing strategy for libraries with this consideration in mind, including after feedback from the libraries.<sup>150</sup>

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<sup>144</sup> Ms. Hildreth discusses the challenges with pricing and terms of ebook licenses but also acknowledges that libraries are underfunded. (Expert Report of Susan Hildreth dated February 25, 2022 (“Hildreth Report”), ¶¶ 94-105) Her commentary does not suggest inefficiencies or market failure in the supply of ebooks to libraries, but rather reflects the budgetary challenges that all public institutions routinely struggle with.

<sup>145</sup> See, e.g., PRH0058941 ([REDACTED]).

<sup>146</sup> See Potash Deposition, Exhibit 11 (reflecting monthly eBook loan data from January 2010 through December 2020). See also, Spreadsheet produced by OverDrive, “1 & 2 - CONFIDENTIAL - Checkout Data” spreadsheet reflecting annual eBook checkout data from 2010 through 2020, including monthly data for 2020.

<sup>147</sup> See, e.g., Potash Deposition, p. 148 (explaining that ebooks are “convenient” for being able to be discovered and delivered through a connected device almost anytime and anywhere.”).

<sup>148</sup> For example, in January 2010, Overdrive offered approximately [REDACTED] that it loaned to patrons in [REDACTED]; in December 2020, Overdrive offered approximately [REDACTED] that it loaned to patrons in approximately [REDACTED]. See Potash Deposition, Exhibit 11.

<sup>149</sup> See, e.g., Deposition Testimony of Adam Silverman taken December 6, 2021 (“Silverman Deposition”), pp. 72-73 (testifying that if HarperCollins offered a perpetual ebook model to public libraries, the model “would impact other channels, such as retail” and could “cannibalize retail sales”).

<sup>150</sup> Silverman Deposition, pp. 37-38 (in order to evaluate the “impact [of the perpetual model] on author revenue and usage and its role in the marketplace[.]” HarperCollins “did research understanding eBook usage at libraries, so to understand libraries, what they’re purchasing was between the print and eBook at the time, what their plans were. To try and understand the usage within the channel” and this research “primarily [] involved talking to a lot of libraries to understand eBook usage. That fell to me, and so I spent time calling libraries, talking to their catalog acquisition contacts”). See also, Dye Deposition, pp. 173-174 (“we were hearing that libraries were wanting the basically lower prices and not the need to have perpetual access for the titles, particularly public librarians and school librarians” and explaining that “we thought with not having something perpetual, we see that at a higher value as opposed to the two-year term”); See also, Lazarus Deposition, pp. 110:21-111:2 (explaining that Hachette moved away from a perpetual model for public library sales because “it was clear that the...offer of having a library pay one time for a

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51. For public libraries, Penguin Random House, Hachette, and HarperCollins have for several years offered a One Copy/One User license with “metered access”, placing either time period limitations of different lengths or limitations on the number of circulations for their library ebook licenses. Several publishers have also recently introduced a “pay-per-use” (“PPU”) model, which permits a library to obtain a single copy for an individual user on a one-time basis. The PPU model does not require upfront investment from libraries and is well-suited for popular backlist books, or small or rural libraries with smaller budgets.<sup>151</sup> For academic libraries, Penguin Random House, and Hachette currently offer perpetual licensing for ebooks, as well as HarperCollins for select titles.<sup>152</sup> In contrast to other publishers, Wiley publishes a considerable number of academic titles, and offers assorted perpetual, concurrent access, and subscription database models to libraries for their ebooks. See Appendix D for additional evidence of publishers’ experimentation with different models for library ebooks. All publishers limit the

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valuable eBook that they can lend indefinitely forever as many times as they have patrons to lend it to is...not a good value proposition for an author or a publisher or the many other people in the ecosystem, including, you know, just our -- our general marketplace.”).

<sup>151</sup> Under the PPU model, the fee is incurred for a single, individual use and only when the particular title is checked out by a patron. *See* Marwell Deposition, pp. 227-28 (explaining that the PPU model is “very exciting” for libraries because “it allows libraries to have a very large number of titles available to their patrons, which was one of the missing issues and one of the issues that came up when we chose the metered model. So basically it allows a library to have -- I think our number is 15,000 titles listed as available . . . it really democratizes the availability for eBooks in public libraries without having to spend any money up front, only on demand. So it [] serves a big part of their mission for those who are participating to be able to represent the -- a lot more titles.”); Silverman Deposition, p. 130 (“pay-per-use was especially seen as positive for libraries because with limited budgets”); *id.* pp. 155 (reviewing email stating that “smaller libraries are withholding funds from the 26 circ. model; bigger libraries in need of a model that makes it possible to provide deep backlist titles - which this model will enable HarperCollins to capture” and explaining that “one observation [in conversations with aggregators] that came up is libraries with smaller funds need to be more particular about what they purchased, because they need to make sure the titles are being used; right? And purchasing eBooks under the assumption there will be demand can be more trying for smaller libraries with smaller budgets.”); Andrew Albanese, “PRH Continues Temporary E-book, Digital Audio Terms for Libraries,” November 5, 2020. (<https://www.publishersweekly.com/pw/by-topic/industry-news/libraries/article/84803-as-covid-19-cases-surge-prh-again-extends-temporary-e-book-digital-audio-terms-for-libraries-schools.html>.) “Librarians have told PW that the change in PRH’s terms was appreciated and useful, as libraries have tried to minimize the impact of physical closures on their digital holds lists—and on their budgets.”).

<sup>152</sup> *See* Digital Terms of Sale for Academic Libraries, Electronic Books and Digital Audiobooks – Perpetual Purchases to Academic Libraries, February 2020 (HACHETTE0008570); Terms of Sale for eBooks: U.S. and International (excluding Canada), Academic Library Wholesalers, October 1, 2018 (PRH0006999); Higher Ed. Library Channel In-Perpetuity eBook Model Test August 2, 2018 (HC0012891).

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distribution of library ebooks to a defined narrow community (members of a public library or library consortium or members of an academic library).<sup>153</sup>

**C. Revenues from backlist book titles are substantial and important to publishers**

52. "Backlist" book titles<sup>154</sup> constitute a considerable portion of each of the Plaintiff Publishers' annual sales. For example, HarperCollins estimates that across all formats and markets, backlist book titles make up about 50% of annual revenue.<sup>155</sup> During the 2017–2020 time period, HarperCollins licensed more than [REDACTED] backlist titles in ebook form to libraries, as compared to approximately [REDACTED] ebook titles licensed. It also sold more backlist print book titles than frontlist print book titles to libraries.<sup>156</sup> Data produced by Penguin Random House show that annual revenues from backlist titles exceeded revenues from newer titles in 2018–2020.<sup>157</sup> Penguin Random House also licensed more backlist ebook titles than frontlist ebook titles during the time period of the produced data.<sup>158</sup> In the case of Hachette, revenues from backlist titles exceeded revenues from frontlist titles in the commercial ebook market in 2019 and 2020.<sup>159</sup> Backlist titles published by Hachette are also considerable in terms

<sup>153</sup> See, e.g., PRH0007002 (Penguin Random House Terms of Sale for library eBooks (Two-Year Model) limited only to public libraries, defined as "an entity that is established to serve a defined community, district or region, supported in whole or in part with public funds . . ."); Marwell Deposition, p. 56 (HarperCollins' two primary lending models are available to public libraries, which are "institution[s] that [are] grounded in a community, that ha[ve] a set geographical area that [they serve[]]"); Potash Deposition, pp. 76:7-77:18 (explaining that a library may work with OverDrive to set up a standalone collection for that particular library or join a consortium of participating libraries, limited such that the libraries must be linked geographically).

<sup>154</sup> Penguin Random House, HarperCollins and Wiley consider books published more than a year ago to be backlist books, and books published within last year to be frontlist books. See Weber Deposition, pp. 101-02; Restivo-Alessi Deposition, p. 56; Pavese Deposition, p. 216; Hachette defines backlist books as those published more than two years earlier. See Sevier Deposition, pp. 64-65.

<sup>155</sup> "Our backlist makes up about 50% of our annual revenue." HC0017900 at HC0017901-03..

<sup>156</sup> In 2020, for example, revenue from all frontlist library ebook sales was [REDACTED] and revenue from all backlist library ebook sales was [REDACTED]. HC0030132.

<sup>157</sup> PRH0072194. Revenue includes sales across all formats (i.e., ebooks, hardcover, paperback) and markets.

<sup>158</sup> PRH0058941. Revenues from ebook licensing were greater for newer titles than for older titles due to differences in pricing.

<sup>159</sup> See HACHETTE0010909 at HACHETTE0010914 (for 2019, retail backlist revenue was [REDACTED] and retail frontlist revenue was [REDACTED]; for 2020, retail backlist revenue was [REDACTED] and retail frontlist revenue was [REDACTED]).

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of library circulations and revenue.<sup>160</sup> Further, the sales data produced regarding the Works in Suit demonstrates that many backlist books with substantial revenues were originally published much more than a year earlier, what publishers refer to as “perennial sellers.”<sup>161</sup>

53. Publishers rely on the consistent and substantial revenue stream from backlist book titles to offset the financial risks that publishers undertake when publishing new books, which have an uncertain future revenue stream.<sup>162</sup>

## V. INTERNET ARCHIVE’S CONDUCT HAS CAUSED MARKET HARM

54. In this section I discuss how to conceive of the harms the Plaintiffs have experienced as a consequence of IA’s conduct. I assume, for the purpose of developing an economic framework for assessing the harm to Plaintiffs, that the trier of fact finds Internet Archive liable of infringing Plaintiffs’ copyrights related to the Works in Suit. These harms, which Plaintiffs would not have suffered if IA had not infringed the Plaintiffs’ copyrights, include lost license fees, lost sales, and reduced revenue as a result of any downward effect on market prices attributable to IA’s infringement.

55. The approach I discuss in this section is a logical framework for understanding not only how IA’s conduct affects Plaintiffs with respect to the Works in Suit, but also how IA’s

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<sup>160</sup> HACHETTE0010909 ([REDACTED])

<sup>161</sup> See, e.g., PRH0025907 (*Lord of the Flies*, published in 1954, and with net sales of [REDACTED] between 2010-2020), *House on Mango Street* (published in 1983, with net sales of [REDACTED] between 2010-2020), *The Bluest Eye* (published in 1970, with net sales of [REDACTED] between 2010-2020), *Song of Solomon* (published in 1977, with net sales of [REDACTED] between 2010-2020), HACHETTE0002473 (*Catcher in the Rye*, published in 1951, with net sales of [REDACTED] between 1999-2020); HC0003510 (*Little House in the Big Wood*, published in 1932, with net sales of [REDACTED] between 1992-2020), *Their Eyes Were Watching God* (published in 1937, with net sales of [REDACTED] between 1992-2020), and *Little House on the Prairie* (published in 1935, with net sales of [REDACTED] between 1992-2020).

<sup>162</sup> Sevier Deposition, pp. 118-19.

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challenged conduct affects the Plaintiffs for their other works that IA is distributing without authorization.<sup>163</sup>

**A. Internet Archive did not pay Plaintiffs a fee for the Works in Suit that it distributed**

56. As I discussed earlier, libraries pay “library ebook fees” for ebooks independent of any payment for a print book of the same title. The library customers are permitted to loan these ebooks subject to the terms and conditions of the licenses. Fees from these licenses amount to millions of dollars in annual revenue for each Plaintiff. IA did not acquire authorized ebooks for library lending and instead scanned physical books to create digital books.<sup>164</sup> Therefore, IA did not pay the Plaintiffs a fee for its distribution of the Works in Suit as ebooks, or any of the 33,003 works published by the Plaintiffs in print and digital form and hosted on the Free Ebooks Website (“33,003 Works”),<sup>165</sup> that Internet Archive digitized and is distributing. Consequently, by scanning a print book, putting the digitized copy if on its Free Ebooks Website and distributing it, and failing to pay the Plaintiffs a fee for the digital distribution rights, IA harms the Plaintiffs..

**B. Lost library license fees and print book sales to libraries**

57. Similarly, libraries do not pay Plaintiffs a licensing fee when they gain access for their patrons to unauthorized digital copies of books created and distributed by IA. In this section, I consider harm from IA’s conduct stemming from lost fees from libraries for both ebook licenses and print book sales.

58. First, let’s consider harm from IA’s conduct in Plaintiffs’ market for licensing of ebooks to libraries. IA permitted borrowing of unauthorized digital copies of the Works in Suit to

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<sup>163</sup> It is my understanding that 33,003 works published by plaintiffs in print and digital form are available to borrow from IA’s Free Ebook Website. *See* Foster Report at ¶¶ 243-45 and Foster Report, Table 5. 33,003 is the total number of titles for each of the four plaintiffs.

<sup>164</sup> See the Summary of Opinions for evidence of library ebook lending volumes. When Plaintiff Publishers and authors offer digital books for authorized short-term distribution to libraries, they receive substantial library ebook fees. These fees are paid initially by library aggregators and then passed on to libraries, who, working with the aggregators, distribute and display digital books to their patrons for short term loans (with DRM to prevent further copying).

<sup>165</sup> *See* Foster Report at ¶¶ 243-45 and Foster Report, Table 5. 33,003 is the total number of titles for each of the four plaintiffs.



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anyone with an internet connection, including library patrons. To the extent patrons substituted unauthorized copies from IA for legal ebooks offered by libraries,<sup>166</sup> libraries likely demanded fewer licenses from Plaintiffs. Additionally, Internet Archive made unauthorized digital copies of the Works in Suit, and a mechanism to loan the unauthorized copies to patrons, available to libraries at a zero price. Internet Archive told libraries that it “mak[es] every library’s collection into a digital collection by allowing a library to lend a digital version of physical volumes they own.”<sup>167</sup> IA also told libraries that Open Libraries Program “ensures that a library will not have to repurchase the same content repeatedly simply because of a change in format.”<sup>168</sup> Via such claims, IA appears to have encouraged libraries to rely on the Internet Archive Free Ebook Website instead of licensing authorized ebooks, including by telling libraries that they “may integrate links to the borrowable Books [on Internet Archive’s website] in their catalog and other services.”<sup>169,170</sup> This free alternative to ebooks licensed from Plaintiffs and loaned to library

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<sup>166</sup> See, e.g., Restivo-Alessi Deposition, p. 141 (in response to question “Are you aware of any impact on the revenue of [the Works in Suit] coinciding with their availability for borrowing from the Open Library?” explaining, *inter alia*, “the libraries themselves, I believe, are linking to the [IA] website, and therefore, they’re not buying copies either in 26 circles or in pay per use. . . . So I can’t -- you know, I can’t give you a specific number, and I don’t follow those titles, but it goes -- to me, it seems like a no-brainer that we would have loss of sales” from library patrons obtaining a copy through IA); Weber Deposition, p. 203 (explaining that Penguin Random House loses sales to libraries because, *inter alia*, “we now see that there are libraries that right next to an OverDrive checkout button will have a button there that says ‘get from the Internet Archive.’ So we could have had more revenues right there from -- from a legitimate aggregator, but instead it’s going to the Internet Archive.”);

<sup>167</sup> INTARC00151363

<sup>168</sup> INTARC00354190.

<sup>169</sup> (INTARC00151363: Internet Archive, “Agreement to participate in Open Libraries.” ([https://docs.google.com/forms/d/e/1FAIpQLSc\\_8y\\_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwbpjmdxYrOnQ/vi](https://docs.google.com/forms/d/e/1FAIpQLSc_8y_ahE6gtOGVInd5y0R74AnHhz7RsX6cMmwbpjmdxYrOnQ/vi) ewform, viewed on April 28, 2022.) Libraries provided links on their websites to the Free Ebook Website either on card catalog book listings or their general list of resources as a source of ebooks for its patrons. See, e.g., Onondaga County Public Library, “E-Books and More.” (<https://www.onlib.org/find/e-books-and-more>, viewed on April 28, 2022.); Denver Public Library, “Online Resources for Reading at Home With Kids in Kindergarten-2nd Grade.” (<https://kids.denverlibrary.org/activities/k-3/online-resources-reading-home-kids-kindergarten-2nd-grade>, viewed on April 28, 2022.); Depo. Transcript of S. Potash, Exhibit 18 (Saugerties Public Library (Saugerties, NY) (Open Library listed as one of several options on “Borrow an eBook & Audiobook” webpage, under “Where else can I get free ebooks and audiobooks?”), <http://saugertiespubliclibrary.org/digital-books/>; Mesa County Libraries (Grand Junction, CO) (website lists Open Library and Internet Archive as two sites that provide “free ebooks from the web”), <https://guides.mesacountylibraries.org/downloads/ebooks>; Burlingame Public Library (Burlingame, CA (in Silicon Valley)) (OverDrive and Open Library listed as two of only four resources to access “eBooks and eAudiobooks”), <https://www.burlingame.org/library/explore/ebooks.php>).

<sup>170</sup> Some libraries even listed links to IA’s Free Ebook Website alongside OverDrive or other authorized library ebook aggregators. See, e.g., INTARC00141514 (Georgetown Law Library catalog presenting links to access eBook through traditional lending as well as “Full text availability” from “Internet Archive Controlled Digital Lending”); Potash Deposition, Exhibit 17, (catalog entry for “The Catcher in the Rye” on Dartmouth College Library website



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patrons through authorized library ebook aggregators such as OverDrive likely led some libraries to not purchase and/or renew some of their ebook licenses for the Works in Suit and/or Plaintiffs’ other works on the Free Ebook Website. Such a result is consistent with the effect of a zero-priced substitute on overall market sales, as I discussed earlier.<sup>171</sup> Displaced library sales are consistent with Ms. Hildreth’s expert report, where she states that “a library decided not to license a title because digitized print copies are available for borrowing under CDL...”<sup>172</sup>

59. Lost sales as a result of IA’s conduct harm not only Plaintiffs Publishers and authors, but also aggregator platforms, such as OverDrive, that are Plaintiffs’ partners in the market for distributing and licensing ebooks to libraries.<sup>173</sup> Indeed, as one of Internet Archive’s employees put it, “reality has it that we are competing for eyeballs with Amazon, Goodreads ..., Overdrive, OCLC Worldcat and countless other websites.”<sup>174</sup>

60. IA’s conduct also likely affected sales of print books to libraries. This is because increased supply of digital books for borrowing likely reduced library patron demand to borrow print books, thereby reducing library demand to purchase print books. Lost print book sales are also consistent with academic literature that examines the displacement effect of ebooks on print book sales. The study by Sharma, Telang and Zentner (2020), which spans 2004–2015 and many

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includes link to Open Library); *see also* Dye Deposition, pp. 40:9-41:11 (“Many of the libraries’ websites throughout the country, they will actually offer a link to Internet Archive to get more information. So they will have it as resources to get e-Content and they will list, along with links for their aggregator, where they have their e-Content or maybe it’s video content, et cetera, they also have listing Internet Archive as a source for their patrons to click and search. . . . it stands to reason that a patron that’s visiting their library’s website and sees that link, they assume that . . . the library is linking to a reputable source for them to get the e-Content they may be looking for.”); Restivo-Alessi Deposition, p. 141 (in response to question “Are you aware of any impact on the revenue of those titles coinciding with their availability for borrowing from the Open Library?” explaining that “the libraries themselves, I believe, are linking to the [IA] website, and therefore, they’re not buying copies either in 26 circs or in pay per use.”).

<sup>171</sup> See Section III.B.

<sup>172</sup> Hildreth Report, ¶ 11; *see also* Potash Deposition pp. 189-90 (testifying that if one of OverDrive’s university library customers includes a link for its patrons to access digital books from Open Library, IA would “be another competitive supplier to books that we offer for university libraries to acquire”[,], that “if any university library we serve has the option of getting it from other sources, yeah, those other sources are all competitors” and that “where a university wanted to acquire lending permissions for an eBook copyrighted for our catalog and the university was able to supply it from any other source, any other source would be a competitor.”). I further discuss this in Section VII.A.

<sup>173</sup> For example, in 2020, OverDrive processed approximately [REDACTED] loans of ebooks to library patrons from all publishers. Spreadsheet produced by OverDrive, “1 & 2 - CONFIDENTIAL - Checkout Data.xlsx.”

<sup>174</sup> INTARC00374675.

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titles,<sup>175</sup> as well as other studies by Li (2021), and Lee et al (2020), all find that sales of ebooks cannibalize print books sales.<sup>176,177</sup> It is my understanding that over time publishers have developed and refined pricing strategies in an effort to minimize cannibalization of sales in one format/market on sales in another format/market.<sup>178,179, 180</sup> To the extent that empirical studies find sales displacement at all, this is informative about the effect that a free digital book substitute available for borrowing has on the demand for print books, including as a result of Internet Archive’s conduct.

### C. Lost sales to consumers in the retail market

61. We know that for many consumers there is a trade-off between borrowing a book (print or ebook) from a library and purchasing the book (print or ebook) in the retail market (*e.g.*, from Amazon or Barnes & Noble).<sup>181</sup> Although consumers do not pay a library to borrow a

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<sup>175</sup> Sharma, Siddhartha and Telang, Rahul and Zentner, Alejandro, “The Impact of Digitization on Print Book Sales: Analysis using Genre Exposure Heterogeneity,” SSRN Working Paper, (November 25, 2019) (“Sharma et al. (2020)”). The authors examine print sales for nearly all books published in the U.S. in 2004–2015 across a variety of genres and find that on average, ebooks “decreased print sales of adult fiction books (the most popular genre in the ebook format) by about 30%. “We also find that the effect size varies over time, with little effect between 2008–11 and a much larger impact afterwards.” (p. 4)

<sup>176</sup> Hui Li, “Are E-Books a Different Channel? Multichannel Management. Quantitative Marketing and Economics,” pp. 179–225 (January 2021). Based on a theoretical model, authors conclude that nearly 72% of ebook sales “would have been print book sales in the absence of ebooks.” (p. 3)

<sup>177</sup> Lee, Kyunghee and Han, Kunsoo and Lee, Byungtae, “Heterogeneous Effects of Ebook Distribution on Print Sales: The Role of Distribution Strategies and Book Characteristics,” SSRN Working Paper (March 23, 2020). The authors find that “ebook releases led to a 10.7% reduction in print sales over the eight-week estimation period.” (p. 1)

<sup>178</sup> When pricing library ebooks, Plaintiff Publishers model the decrease in sales due to library ebook circulations. *See, e.g.*, Pavese Deposition, pp. 237–40 (discussing Monte Carlo analysis with assumptions regarding circulations and impact on cannibalization of sales in markets.)

<sup>179</sup> Lazarus Deposition, pp. 36–38 (in response to question about whether “Hachette [has] conducted any analysis about the effect of library lending on eBook revenue[,]” testifying that “We’ve compared our retail sales rates and corresponding rates of library reads, what we would call circulations. So we look at the rate of circulations going up, let’s say, and look at the rate of retail eBook sales going down” and that Hachette conducts this analysis on a small scale each month and “a bigger analysis” every six months).

<sup>180</sup> One study, Hailang Chen, Yu Jeffrey Hu, and Michael D. Smith, “The Impact of E-book Distribution on Print Sales: Analysis of a Natural Experiment,” *Management Science* (Forthcoming), 65(1):19–31 (August 2017), finds no evidence of sales displacement. However, though their sample is limited to 182 ebooks released in May and June 2010.

<sup>181</sup> This is consistent with testimony from publishers that library reading cannibalizes retail sales. *See, e.g.* Pavese Deposition, pp. 237–40; Lazarus Deposition, pp. 36–38.

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book, they incur transactions costs in the borrowing of a book.<sup>182</sup> These costs include the effort of having to sign up for a library membership, the time a consumer must spend finding the work on the library's website, possibly having to wait for another patron to return a digital loan before the work is available to borrow, and a limit on the amount of time the borrower may retain the book before it must be returned to the lender.<sup>183</sup> Economists expect that if the transaction costs of borrowing a book fall (*e.g.*, higher availability and lower wait times) relative to the cost of purchasing a book (*e.g.*, it becomes "easier" to borrow a work), some consumers will be more likely to borrow the book instead of purchasing it.

62. Because IA offered its digitized copies at a zero price, more digital versions of the Works in Suit were available to borrow by consumers relative to the but-for-world, where IA did not create and distribute free unauthorized copies.<sup>184</sup> This increased availability likely had the effect of reducing the transactions costs consumers incurred to borrow copies of the Works in Suit, whether from IA's Free Ebook Website or through libraries that provided links to Internet Archive's Free Ebook Website on their online card catalogs and library webpages. In other words, the availability of unauthorized digital copies, in addition to ebooks licensed from Plaintiffs, made it easier for consumers to find a copy of one of the Works in Suit to borrow than it would have been absent IA's conduct. This reduction in transaction costs as a result of IA's conduct likely led to lower sales in the retail market, relative to the but-for world (in which only legal digital copies were available to borrow). In other words, but-for IA's conduct, some

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<sup>182</sup> To the extent that transaction costs associated with library borrowing are on a per-book basis, they represent a cost to read a library book. *See, e.g.*, Nicholson and Snyder (2008). "It makes little difference whether *t* represents a per-unit tax or a per-unit transaction fee because the analysis of the fee's effect on the market will be the same." (p. 446) Transaction costs are also commonly described as "the costs to using the market—such as costs of organizing and transacting exchanges." Besanko et al. (2016), p. 495.

<sup>183</sup> For example, a 2012 survey of library ebook borrowers conducted by Pew Research Center, noted that some respondents voiced dissatisfaction with the two-week time period limitation for ebook borrowing. "[Two weeks is] not long enough because there are so few e-book copies available that I almost always have to place a hold first and then inevitably, 2-4 come available at the same time and between work, school and family, I can't get through them all in that time." Pew Research Center, "Part 6: A closer look at e-book borrowing. Overview of responses in our online panel." June 22, 2012. (<https://www.pewresearch.org/internet/2012/06/22/part-6-a-closer-look-at-e-book-borrowing/>.)

<sup>184</sup> In addition to the discussion in Section III.B., I note that this point simply follows from economic theory, where an increase in competing products into a market, *ceteris paribus*, leads to an increase in overall (total) quantity. *See, e.g.*, Nicholson and Snyder (2008), pp. 531-532, 536-537; Baye and Prince (2020), pp. 294-295.

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consumers likely would have purchased a copy of the Works in Suit in the retail market (as an ebook or a print book) rather than borrow a copy from a public library.

**D. Free digital books devalue the publishers’ products**

63. IA’s creation and distribution of free unauthorized digital copies of the Works in Suit has likely devalued Plaintiff Publishers’ products in several ways. First, as I already discussed in Section III.B., economic theory predicts that the availability of a zero-price alternative puts downward price pressure on the incumbent product if the products are substitutes. Second, to the extent price is a signal of quality (*e.g.*, consumers may expect to pay a higher price for goods and services that are considered “premium” or “luxury”), consumers may perceive that the product is cheapened by the availability of a free substitute.<sup>185</sup>

**E. Internet Archive’s conduct exposed Plaintiff Publishers to the risk of inadequate protection of their intellectual property and Internet Archive’s efforts to protect rightsholders do not mitigate its harm**

64. Although IA claims to have protected the unauthorized copies of the Works in Suit it created from subsequent infringement and that its lending practices are consistent with CDL, its actual efforts have exposed the rightsholders to heightened risk of infringement. For example, IA has recognized that it has mischaracterized certain books, identifying them as public domain when they were still in-copyright.<sup>186</sup> IA’s system relies on metadata to implement the “overlap analysis” process of the Open Libraries program, and to determine which items are in-copyright and therefore whether they will be distributed with CDL or without any restrictions. IA’s mistakes with metadata (different ISBNs listed for a single digitized copy of a print book;<sup>187</sup>

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<sup>185</sup> See, *e.g.*, Wolinsky, Asher, “Prices as Signals of Product Quality,” *The Review of Economic Studies*, Vol. 50, No. 4, 647-658 (October, 1983); Rao, Akshay R., and Kent B. Monroe, “The Effect of Price, Brand Name, and Store Name on Buyers’ Perceptions of Product Quality: An Integrative Review,” *Journal of Marketing Research*, Vol. 26, No. 3, pp. 351-357 (August, 1989).

<sup>186</sup> Supplemental Expert Report of Ian Foster dated March 31, 2022 (“Supplemental Foster Report”), at ¶284, referencing Pls. Ex. 40, INTARC00292933 (discussed at Mills Tr. at 251:23-255:12), “which involves an internal discussion recognizing that “we have a class of books which were once Public Domain / unrestricted and have since been moved into ‘inlibrary’.”

<sup>187</sup> Supplemental Foster Report. at ¶134.

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title, author, or ISBN listed inaccurately;<sup>188,189</sup> overwriting existing data and sourcing incorrect data<sup>190</sup>) can lead to one book being confused with another. Consequently, a number of concurrent copies may be distributed to users of the Free Ebook Website being inconsistent with IA's stated CDL policy. Second, IA has also had numerous takedown failures, including failure to comply long-term with the Penguin Random House 2014 list of titles IA promised to remove and other takedown requests by Plaintiff Publishers.<sup>191</sup> Moreover, IA was willing to allow for unrestricted access during NEL.

65. Copyright law bestows property rights for a particular literary work on the rightsholders of that work. As I discussed earlier, these property rights provide the ability and incentive to protect and exploit literary works for the benefit of readers, authors, publishers and other market participants. IA is not a rightsholder of the Works in Suit, and therefore has no economic incentives to protect or exploit the unauthorized copies it has created in a manner consistent with the preferences of the rightsholders. Economic theory tells us that IA cannot be expected to protect the unauthorized copies from further infringement to the extent acceptable to the rightsholders. Furthermore, IA's conduct is consistent with that predicted by theory. Consequently, IA's efforts to provide some protection to the unauthorized copies, through DRM chosen by IA and its claimed CDL practices, do not mitigate the harm to Plaintiffs from its conduct.

## **VI. ALLOWING INTERNET ARCHIVE TO CONTINUE ITS CONDUCT, AND OTHERS TO SIMILARLY CREATE AND DISTRIBUTE UNAUTHORIZED COPIES, WILL HARM MARKET PARTICIPANTS, INCLUDING CONSUMERS AND ARTISTS**

66. My analysis also includes the impact of Internet Archive's actions as a result of further widespread conduct by Internet Archive or similar conduct by other market participants, including if the court were to condone IA's conduct. Widespread conduct that I consider includes

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<sup>188</sup> Supplemental Foster Report at ¶168.

<sup>189</sup> Foster Report, ¶ 273-274. In an analysis of the 379 digitized copies of books produced by Internet Archive for the 127 Works In Suit, Dr. Foster found six cases in which title and author metadata substantially misidentified the scan. Foster Report, ¶ 276.

<sup>190</sup> Supplemental Foster Report at ¶284.

<sup>191</sup> Supplemental Foster Report. at ¶¶249- 274.

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the following scenarios: Internet Archive scaling up its ebook offerings (including without limitation on the number of titles and number of copies of given titles); substantially expanding the number of partner libraries in its Open Libraries Program (from 65<sup>192</sup> currently, to many of the 9,000+ public libraries<sup>193</sup>); or other copycat website(s) or non-profit organization(s) scanning print books and offering them as unauthorized digital books under some brand of CDL. In each of these scenarios, the number of titles and concurrent copies of a title available to libraries and the public on IA’s Free Ebook Website (or similar websites), would skyrocket.<sup>194</sup> IA would become the central repository of ebooks, obtained without payment to the authors and publishers.

67. In each of these scenarios, IA and other organizations do not pay plaintiffs a fee for their unauthorized ebooks. This includes, for example, if other organization or copycat websites used “not-in-use” copies of backlist titles in print book form (currently available in used bookstores, private homes or library shelves, including copies of books that are “discarded”<sup>195</sup> from libraries). Further, if Internet Archive or copycat websites were to routinely distribute books published within the last five years, or if IA were to change the protocols of its lending practices, or otherwise scale up its ebook offerings, this would amount to substantial unpaid fees. Under all these scenarios, if IA’s conduct were allowed to continue or became widespread, rightsholders would experience substantial revenue loss.

68. Moreover, libraries would no longer need to obtain legal ebooks to serve their communities’ demand for backlist books.<sup>196</sup> This would create very substantial market harm to authors and publishers because it would displace demand from potential and existing library patrons for both library ebooks and print books from authorized distribution channels. At the

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<sup>192</sup> Less than 65 libraries in the U.S. currently participate in IA’s Open Libraries Program, most of them academic. *See* Defendant Internet Archive’s Objections and Responses to Plaintiffs’ Second Set of Interrogatories, pp. 6-8.

<sup>193</sup> The Institute of Museum and Library Services Fiscal Year 2019 Survey indicates that there are 9057 public libraries.. Also *see* Internet Archive, “Open Libraries.” (<https://archive.org/details/openlibraries>, viewed on April 21, 2022.) *See also*, Defendant Internet Archive’s Objections and Responses to Plaintiffs’ Second Set of Interrogatories.

<sup>194</sup> Libraries would be able to link to from their website card catalogs as an alternative to purchasing authorized ebook licenses for titles offered by Plaintiff Publishers. Consumers would be able to read ebooks without accessing them through their local library or purchasing them on the retail market.

<sup>195</sup> Hildreth Report, ¶ 84 (“When the book’s popularity has diminished, the library will review the condition of all the copies, keep a small number of copies in the best condition, and weed or discard the remaining copies.”)

<sup>196</sup> Some libraries might purchase some authorized ebooks because of their higher quality than Internet Archive’s ebooks.

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extreme end of the spectrum of widespread conduct, there would be a scenario in which IA or similar websites were known to all libraries and all consumers and had free unauthorized digital books of all published backlist titles, with a sufficient number of copies to meet worldwide demand without wait lists.

69. Libraries’ book purchases depend on patrons’ demand, which is high for many backlist books that libraries/library aggregators currently pay millions of dollars to license ebooks for.<sup>197</sup> If multiple parties, including organizations operating websites similar to IA, were to mimic Internet Archive and provide free digital books for backlist titles, these alternatives would substitute for the authorized versions, displacing demand from library patrons for library ebooks and print books from authorized distribution channels (both for the 127 Works in Suit and the 33,003 Works). Likewise, even if many public libraries were to become “partner libraries” of Internet Archive or other equivalent websites and/or IA were to become a central repository, the number of concurrent copies of a title freely available “to borrow” on IA or similar websites would skyrocket; libraries would no longer need to obtain a considerable number of legal backlist ebooks titles to serve their communities because they could link to IA or similar websites as an alternative to their purchase of authorized ebook licenses, as explained by Ms. Hildreth.<sup>198</sup> As a result, libraries would purchase considerably fewer ebook licenses for backlist titles offered by Plaintiff Publishers. If Internet Archive or copycat websites were to routinely distribute books published within the last five years, Plaintiffs’ sales in the market for distribution and licensing of ebooks to libraries would be further reduced.

70. If Internet Archive’s conduct were to scale up or become widespread, both rightsholders and consumers also would be harmed in the longer term. These harms would take the form of lost fees or displaced sales, as authors likely write fewer books, or expend less time and creative effort. This would result in shorter and/or lower quality works and publishing houses supporting authors and the creation and distribution of print and ebooks making fewer

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<sup>197</sup> Among the Works in Suit, titles with high demand include titles by Toni Morrison, Laura Ingalls Wilder, and Malcolm Gladwell. See IV.C. for a discussion of backlist books.

<sup>198</sup> Hildreth Report, ¶ 11.



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investments in distribution technology, such as digital enhancements, or innovative new products.

71. Because IA’s conduct leads to considerable harm to rightsholders and consumers, it cannot be in the public interest. IA’s claim that “the public derives tremendous benefit from the program, and rightsholders will gain nothing if the public is deprived of this resource,”<sup>199</sup> presumes that creative works should cost nothing and implies that the public was deprived of access to the Works in Suit or any other in-copyright titles absent IA’s unauthorized activities. Presuming that creative works should be free in this setting is analogous to suggesting that it would be a good policy to allow consumers to remove products from retail shelves without paying; no economist would suggest that, because then the production of those products would stop.<sup>200</sup>

72. IA’s implication that the public was deprived of access to the Works in Suit or any other in-copyrighted titles that IA distributed is false. Copyright protection balances the trade-off between providing economic incentives to create to rightsholders and promoting public access to created works.<sup>201</sup> Based on economic indicators in the book market, including readership volume of free public library ebooks in the U.S.<sup>202,203</sup> and globally,<sup>204</sup> including as

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<sup>199</sup> Defendant Internet Archive’s Answer and Affirmative Defenses to the Complaint dated July 28, 2020, p. 3.

<sup>200</sup> Liebowitz (2014), p.227.

<sup>201</sup> Yoon, K., “The optimal level of copyright protection,” *Information Economics and Policy*, Vol. 14, 327–348, (2001), p. 328 (“The difficult task of copyright protection, however, is to strike the correct balance between two somewhat contradictory objectives: the first one is to give the right incentive to the producers so that useful works can be created in the first place, and the second one is to promote wide access to and use of the created works so that overall welfare could be improved.”).

<sup>202</sup> In the U.S., nearly [REDACTED] ebook were borrowed for free in 2020 through OverDrive alone. See Spreadsheet produced by OverDrive, “1 & 2 - CONFIDENTIAL - Checkout Data.xlsx.”

<sup>203</sup> See, e.g., INTARC 00354190. The Institute of Museum and Library Services Fiscal Year 2019 Survey indicates that there are 9057 public libraries widely dispersed throughout the country; Potash Deposition, p. 161 (explaining that there are “approximately 9,000 libraries that operate [in the United States] with branches and extensions that may total in the 15,000 if you count every location”); see also American Library Association, “American Library Association Surveys/Reports.” (<https://www.ala.org/tools/research/initiatives>, viewed on April 28, 2022), (“Studies show that libraries are vital digital hubs that provide access to public access technologies and digital content. Millions of people use those technologies for education, employment, civic engagement and health purposes and to enhance their digital literacy skills.”).

<sup>204</sup> Globally, 430 million ebooks were borrowed for free in 2020. *Association of American Publishers, Inc., v. Brian E. Frosh*, United States District Court for the District of Maryland, Case No. DLB-21-3133, Memorandum Opinion dated February 16, 2022, at 8, quoting Pallante Decl. ¶ 16, ECF 7, at 6.

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reported by the Plaintiff publishers,<sup>205</sup> and the broad reach across the country,<sup>206</sup> the market for books provides broad access to the public, including access through the public library system.<sup>207</sup> Based on this evidence, it appears that copyright laws have struck a reasonable balance between the creation of artistic works and public access to those works.

## **VII. INTERNET ARCHIVE’S EXPERTS DO NOT DEMONSTRATE THAT ITS ACTIONS DID NOT CREATE MARKET HARM**

73. It is my understanding that it is Internet Archive’s burden to demonstrate that its conduct did not cause market harm, including that its conduct did not harm the plaintiffs. I have reviewed the expert reports submitted by Professor Reimers and Dr. Jørgensen. In this section I discuss the basis for my conclusion that neither of these experts demonstrate that Internet Archive’s conduct did not harm Plaintiffs.<sup>208</sup> None of IA’s experts address its failure to obtain authorized ebooks, and its failure to pay the Plaintiffs a fee for distributing ebooks for their titles in library-style lending. Moreover, IA’s library expert Ms. Hildreth’s appears to acknowledge that IA’s conduct likely harmed rightsholders.<sup>209</sup>

74. As a separate matter, Internet Archive’s experts also mischaracterize the book market and trivialize the scope of Internet Archive’s actions, which might lead the reader to conclude that harm from Internet Archive’s conduct was not substantial. I rebut these opinions in Section VIII. Further, Dr. Reimers and Dr. Jørgensen do not address the scenario in which

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<sup>205</sup> Two of the Plaintiff publishers have conducted limited studies suggesting that roughly between 39-50% of all ebook “reads” in the U.S. (including retail ebook sales and library ebook reads) are now library ebook reads.. See footnote 143.

<sup>206</sup> In several rural states, the library system covers the entire state, further promoting accessibility of titles . See Potash Deposition, pp. 190-191 (“Q: There are certain library systems that have statewide collections in some markets; is that right? A: Yes”); *see also*, Idaho Digital Consortium, “Home Page.” (<https://idahodigital.overdrive.com/>, viewed on April 28, 2022), (Idaho); Library2Go, “Digital Media” (<https://ndlibrary2go.overdrive.com/>, viewed on April 28, 2022), (North Dakota); OK Virtual Library, “Home Page.” (<https://okvirtuallibrary.overdrive.com/>, viewed on April 28, 2022), (Oklahoma); Mississippi eBook Consortium, “Home Page.” (<https://mlpebooks.overdrive.com/>, viewed on April 28, 2022), (Mississippi).

<sup>207</sup> Public libraries are financed by taxpayers; not by depriving creators and rightsholders of compensation and/or control over the terms and conditions for reproduction and dissemination of their creative works.

<sup>208</sup> Neither Professor Reimers nor Dr. Jørgensen attempt to examine the effect of IA’s conduct on other rightsholders. See Expert Report of Imke Reimers dated February 25, 2022 (“Reimers Report”); Expert Report of Rasmus Jørgensen dated February 25, 2022 (“Jørgensen Report”).

<sup>209</sup> Hildreth Report, ¶¶ 11, 106.

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Internet Archive’s activities expand, or become widespread, and the resulting longer-term impact.

**A. Ms. Hildreth acknowledges that Internet Archive’s conduct likely harmed authors and publishers of the Works in Suit**

75. Ms. Hildreth opines that if IA’s conduct “reduced the necessity of lending those titles via licensed ebooks... [libraries] would reallocate their spending away from ebook licensing for those titles...”<sup>210</sup> Ms. Hildreth’s admission that Internet Archive’s conduct likely caused lost licensing sales of the Works in Suit to libraries is an admission that IA’s conduct harms market participants, including the publishers and the authors of the Works in Suit. When a library chooses not to purchase a title (whether by licensing an ebook or purchasing a print book), the author of that Work in Suit does not receive the royalties that would have been paid had the library licensed or purchased the title and the publisher does not receive any revenue to compensate for the services it provides and investments and risks it undertakes.

76. Although she acknowledges that IA’s conduct likely harmed Plaintiffs, Ms. Hildreth asserts that the availability of digital copies of the type IA created and distributed “does not result in less library spending on books” and that if unauthorized digital copies “are available for borrowing..., a library will use the money it would have spent licensing that title as an ebook on licensing another ebook title—or on purchasing print books.”<sup>211</sup> Ms. Hildreth presents no evidence or analysis to suggest that this assertion is reasonable or has a basis in fact. Moreover, even if the level of library spending on books is not affected by the type of conduct IA engaged in and libraries did reallocate spending from the Works in Suit to other works, Ms. Hildreth presents no argument or evidence that it is reasonable to assume the funds are used to purchase other works published by the Plaintiffs, rather than works from publishers who are not plaintiffs in this case. She also fails to discuss the possibility that IA’s conduct could have diverted spending from the works in suit to other types of products, such as “annual orders for magazines (both print and digital) and reference materials”; “CD’s DVD’s, videos, streaming service subscriptions”; “tools, games”; “annual orders for magazines (both print and digital) and

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<sup>210</sup> Hildreth Report, ¶ 106.

<sup>211</sup> Hildreth Report, ¶ 11.

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reference materials.”; and/or “replacements/binding of damaged/lost materials or periodicals.”<sup>212</sup> Ms. Hildreth’s opinion that the library may have purchased a different title cannot mitigate the harm IA caused rightsholders (including the authors and Plaintiffs) because her construct ignores the very specific harm to the rightsholders.

**B. Dr. Reimers and Dr. Jørgensen do not examine the effect of Internet Archive’s conduct on Plaintiffs’ sales and licenses to libraries**

77. As I discussed earlier, IA’s conduct likely caused Plaintiffs to lose revenue from the licensing of ebooks and the sale of print books to libraries. If IA’s experts seek to demonstrate an absence of market harm related to libraries, they would have to examine sales and licensing to libraries. Furthermore, such an analysis would have to be capable of distinguishing between changes in revenue caused by IA’s conduct and changes in revenue caused by exogenous factors unrelated to IA’s conduct (*e.g.*, COVID, the Black Lives Matter movement and a nationwide focus on racial justice issues, macroeconomic conditions). However, neither Dr. Reimers nor Dr. Jørgensen examine whether IA’s conduct affected Plaintiffs’ revenue from the licensing of ebook versions of the Works in Suit and selling print versions to libraries.

78. Dr. Jørgensen’s claims to have examined the effect of IA’s conduct on sales of the Works in Suit, in ebook and print form, only for one (Hachette) of the four plaintiffs, by considering consumer sales in the U.S., and total (retail and library) sales worldwide. Beyond the numerous substantial flaws in his methodology, which I discuss in the next section, I note that he did not examine the effect of IA’s conduct on revenue from licensing and sales specifically to U.S. libraries, for any of the plaintiffs.<sup>213</sup> Consequently, Dr. Jørgensen cannot offer an opinion regarding the effect of IA’s conduct on Plaintiffs’ revenue from sales to U.S. libraries.

79. Dr. Reimers also fails to examine the effect of IA’s conduct on revenue from licensing and sales to U.S. libraries. Dr. Reimers also does not conduct any analysis of ebook

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<sup>212</sup> Hildreth Report, ¶ 69.

<sup>213</sup> Dr. Jørgensen examines the change in total worldwide revenues between 2Q2020 and 3Q2020 for Hachette, but these figures combine domestic and foreign sales and sales to consumers and to libraries.

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licensing to libraries or sales to consumers. Her approach is limited to an examination of changes in rankings based on consumers sales of print books.

80. Dr. Jørgensen claims to have examined the effect of IA’s conduct on OverDrive lending (*i.e.*, ebook checkouts), which does not necessarily represent the impact of IA’s conduct on licensing revenue, because of the complex relationship between checkouts and revenues from library sales. A library’s response to patron demand is unlikely to be instantaneous; it is determined, among other factors, by ebook licenses that have already been purchased and constrained by the remaining budget, if any.<sup>214</sup> Dr. Jørgensen does not rely on OverDrive revenue data that was produced in this matter<sup>215</sup> and does not discuss and attempt to justify his choice of checkouts as opposed to revenue. In sum, Dr. Jørgensen presents no reasonable basis upon which to draw conclusions about the effect of IA’s conduct on Plaintiffs’ library ebook revenues from an analysis of OverDrive checkouts. Moreover, Dr. Jørgensen did not examine the effect of IA’s conduct on any other plaintiff besides Hachette.

81. Dr. Reimers claims to have examined the effect of IA’s conduct on changes in Amazon sales rankings of the Works in Suit in print book format. As noted above, Dr. Reimers did not investigate the licensing or sales of ebooks. This omission is perplexing, all the more so because in her academic research Dr. Reimers concludes that ebooks are the “closest substitute” to free scanned copies of print books and “physical editions of a title . . . are not necessarily close substitutes for free electronic versions of the same title.”<sup>216</sup> Dr. Reimers claims that she does not have sufficient data to analyze ebooks sales of the Works in Suit.<sup>217</sup> However, an absence of data on ebooks does not imply that it is reasonable or proper to draw inferences regarding the effects

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<sup>214</sup> Throughout his report, Dr. Jørgensen incorrectly implies that libraries and library aggregators pay Publishers based on each checkout, suggesting a relationship between checkouts and revenue. “[Between 2017 and 2020,] OverDrive collected total revenues of [REDACTED] for the [Hachette] titles. This revenue was generated from a total of about [REDACTED] OverDrive checkouts for the Works in Suit published by Hachette.” Jørgensen Report, ¶¶ 38, and 40-41. However, Dr. Jørgensen does not model revenue as a function of OverDrive checkouts when he analyzes the impact of closing of the NEL.

<sup>215</sup> See Spreadsheet produced by OverDrive, “OverDrive\_Supp\_002.”

<sup>216</sup> Reimers (2016), pp. 411, 421.

<sup>217</sup> Dr. Reimers notes “I focus my analysis on print books because title-specific data for ebook sales were not available at a granular enough level to enable me to draw reliable conclusions. In addition, and equally important, granular ebook sales data are not available for other titles, which were not available at the Internet Archive, so there is no proper group of titles to compare changes in sales.” Reimers Report, ¶10 and footnote 8.

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of IA’s conduct on Plaintiffs on the basis of an analysis of print book sales, all the more so because of her research finding that print books are not “close substitutes” for the unauthorized format that IA created and distributed. Dr. Reimers’ own academic research suggests that she overlooked a critical component of Plaintiffs’ revenues. Consequently, her conclusions are unsupported and unreliable.

**C. Dr. Reimers and Dr. Jørgensen fail to differentiate between the effect of Internet Archive’s conduct and effects of other market events unrelated to Internet Archive’s conduct**

82. To determine whether or not IA’s conduct caused harm to the Plaintiffs, one would have to generate reasonable estimates of Plaintiffs’ revenues from the sale and licensing of ebooks and print books to libraries and consumers under a but-for scenario in which the only difference in market conditions is that IA did not infringe Plaintiffs’ copyrighted works. To accomplish this, one would have to develop an empirical model that is capable of modeling the effect of causal factors on sales and licensing revenues and distinguishing between the causal effect of IA’s conduct and other causal factors unrelated to IA’s conduct over the same period of interest. To illustrate this, consider the following hypothetical: a film that is based on one of the works in suit is released during the relevant period; a substantial increase in consumer awareness/interest in the story, as a result of press coverage of the new film, causes sales and library loans of the work (print and ebook) to increase. A model that is intended to provide the trier of fact with a reliable and reasonably accurate measurement of the effect of IA’s conduct on Plaintiffs’ revenues and profits would have to control for the effect of the film adaptation on Plaintiffs’ revenues and profits. In other words, the model would have to be capable of estimating the change in Plaintiffs’ revenues and profits caused by IA’s conduct, independent of the effect of film adaptation, as well as other factors—particularly those correlated with IA’s conduct—likely to cause non-trivial changes in demand for the works and Plaintiffs’ revenues and profits. An uncritical interpretation of the results of a poorly-specified model (e.g., one that does not control for the film adaptation) could be to incorrectly attribute an increase in legal sales as a result of e.g. a film adaptation to IA’s coincident posting of an unauthorized copy of the title on its Free Ebook Website, and erroneously conclude that because legal sales went up, IA’s conduct did not harm plaintiffs.

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1. *Examples of factors that may have affected book sales in Q2 and Q3 2020 unrelated to IA’s conduct*

83. Generally, book sales may fluctuate due to concurrent changes in consumer demand for the particular title (*e.g.*, as a result of film adaptations, as in the example above, or more generally awards, critical mentions,<sup>218</sup> and marketing,<sup>219</sup> including promotional discounting by either the publisher or retailers/wholesalers<sup>220</sup>); availability and prices of competing books (*i.e.*, the release of new works, prices of new print books, prices of used print books, pricing of ebooks), and many more.<sup>221</sup> There are also a number of additional factors that should be considered and typically included in the development of a quantitative model of harm to Plaintiffs from IA’s conduct, such as seasonality (*e.g.*, genres relatively more popular during the summer,<sup>222</sup> whether school is in session and school adoptions<sup>223</sup>) and major events of 2020 (*e.g.*,

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<sup>218</sup> Dr. Jørgensen notes “popular and critical acclaim” as an observable attribute that determines consumer demand for a particular title but does not consider whether titles that he analyzes received critical acclaim during the same period. (Jørgensen Report, ¶ 16.)

<sup>219</sup> *See, e.g.*, Sevier Deposition, pp. 45-46, 56 (testifying that Hachette endeavors for a frontlist title to “go[] on to sell ideally for years” after “the big splashy publicity campaign that we hope for and the big huge investment of marketing money” for that title).

<sup>220</sup> *See, e.g.*, Marwell Deposition, pp. 84-85 (explaining that HarperCollins uses pricing promotions for ebooks, including backlists books, to determine how elastic the price is and “to see which generates more revenue for the author and ourselves; Weber Deposition, pp. 156-59 (explaining that promotional discounts can improve placement in a retailer’s site or remind readers of an author, among other impacts); Pavese Deposition, p. 73 (Wiley applies discounts in different circumstances and channels to promote sales of a title).

<sup>221</sup> *See also* Potash Deposition, pp. 133-36 (agreeing that “that the popularity of a book or the success of a book, in terms of either checkouts or sales, can turn on any number of factors” – including positive internal factors, including “the quality of the book” and positive external factors, including the death of the author (for example, the death of Toni Morrison in 2019), whether the book is made into a book or a television show, if the author makes a prominent appearance on a popular talk show, if the book is selected as part of a prominent book club, if the book receives a significant award, if one or more schools adopt the book as part of a curriculum, or if the author publishes a separate popular book that inspires consumers to purchase other books written by the same author – as well as various “negative” factors, including negative press concerning the author and unauthorized sales); *id.* p. 137:21-23 (“Each book is unique, and unless it’s the same author in a series, it’s hard to make assessments across different authors, different audiences”).

<sup>222</sup> *See, e.g.*, Jennifer Harlan, “A Brief History of Summer Reading,” July 31, 2021. (<https://www.nytimes.com/2021/07/31/books/a-brief-history-of-summer-reading.html>), (providing statistics and anecdotes to support premise that “Something about these dog days, more than any other time of year, invites readers to bury themselves in a book — and not just any book, but one that is lighter, more fun and more transporting than their usual fare”). The data produced by AAP further reflects an annual dip in sales over the summer. *See* AAP000644, AAP000664, AAP000684, AAP000704, AAP000724 (reflecting summer dip in ebook sales for Children’s and Young Adult titles in 2019 that ends in September: May 2019: [REDACTED]; June 2019: [REDACTED]; July 2019: [REDACTED]; August 2019: [REDACTED]; September 2019: [REDACTED]).

<sup>223</sup> “[S]tudents may need to read specific titles to complete their assignments” Jørgensen Report, ¶ 16.



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the complex impact of COVID,<sup>224</sup> increased awareness of racial justice issues,<sup>225</sup> and the presidential election,<sup>226</sup> because these may also have affected sales of print and ebooks and coincided with the period that Dr. Reimers and Dr. Jørgensen focus on. Notably, several of the Works in Suit are routinely included on lists suggesting or setting reading curriculum for children in middle and high school;<sup>227</sup> consequently, one should consider the possibility that to the extent the demand for Plaintiffs Works in Suit declined between Q2 and Q3 2020, some of it

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<sup>224</sup> Data and news reporting all make clear that the bestselling books of 2020 closely tracked these three generation-defining events. *See, e.g.*, Constance Grady, “The great book shortage of 2021, explained,” October 6, 2021. (<https://www.vox.com/culture/22687960/book-shortage-paper-ink-printing-labor-explained>), (explaining that, since the start of the pandemic, “book sales have tracked closely to the trends of the quarantine era: a lot of bread books early on, a lot of books on social justice and race in the summer of 2020 during the George Floyd protests, and books on politics during the presidential election season. Then, after the election, sales of adult fiction began to really take off” and that “many of the social justice titles of the summer [of 2020], such as Ibram Kendi’s *How to Be an Antiracist*, rapidly sold out in print, driving readers to ebooks for their immediacy”).

<sup>225</sup> The death of George Floyd on May 25, 2020 - and the subsequent release of the video footage - resulted in a huge outpouring of support for the Black Lives Matter movement and there were protests across the country over May and June 2020. Starting with this time period, demand for books about race and anti-racism surged. *See, e.g.*, Elizabeth A. Harris, “People Are Marching Against Racism. They’re Also Reading About It,” June 5, 2020. (<https://www.nytimes.com/2020/06/05/books/antiracism-books-race-racism.html>), *See also* Stephanie Merry & Steven Johnson, “What the Country is Reading During the Pandemic: Dystopias, Social Justice And Steamy Romance,” September 2, 2020. ([https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44\\_story.html](https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44_story.html)), (“This year, perhaps as never before, our reading habits reflect our precarious reality. As the country has muddled through a deadly pandemic and a racial reckoning under a cloud of exhaustion and dread, we’ve used books to escape the present, inform our beliefs and educate our homebound children. We’ve found catharsis in apocalyptic science fiction and comfort in romance; advice in self-help guides and a moment of peace, thanks to children’s activity books. Most strikingly, since the death of George Floyd in May, we’ve flocked to books about race and social justice.”). *See also*, Debbie Truong, “These Were The Most Popular Books Of 2020 In D.C., According To The Public Library,” December 28, 2020. (<https://dcist.com/story/20/12/28/most-popular-books-dc-library/>), (explaining that “After the police killing of George Floyd in Minneapolis and as protests for racial justice erupted in city streets, readers sought titles about anti-racism, privilege and white supremacy from the D.C. Public Library. The interest extended into fiction, where books that deal with race were among the most popular”) and that while “[i]n the first two weeks of May, copies of five e-books about race — White Fragility, How To Be An Antiracist, Me And White Supremacy, The New Jim Crow and So You Want to Talk About Race— were downloaded a total of 120 times. In the last two weeks of that same month, they were downloaded 1,242 times, according to [the District of Columbia Public Library].”).

<sup>226</sup> *See, e.g.*, Constance Grady, “The great book shortage of 2021, explained,” October 6, 2021. (<https://www.vox.com/culture/22687960/book-shortage-paper-ink-printing-labor-explained>.)

<sup>227</sup> For example, at least eight of the Works in Suit are listed in a list of “Literature Suggestions” published by the New York State Education Department, which teachers across New York “felt were ‘appropriate and successful with readers in the K-12 curriculum.’” New York State Education Department, “English Language Arts Resource Guide.” (<https://www.p12.nysed.gov/guides/ela/part1b.pdf>, viewed on April 21, 2022.) *See also* California Department of Education, Recommended Literature List, “Recommended Literature: Prekindergarten Through Grade Twelve.” (<https://www.cde.ca.gov/ci/cr/rl/>, viewed on April 21, 2022), (listing several of the Works in Suit on “a searchable database of books for children and teens which helps students, teachers, and families find books that entertain, inform, and explore new ideas and experiences”); Goodreads, “School Assigned Books.” (<https://www.goodreads.com/shelf/show/school-assigned>, viewed on April 21, 2022), (listing several of the Works in Suit).

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could be attributed to the end of the academic year and school-required reading. Dr. Reimers conducts an inconclusive analysis of seasonality and Dr. Jørgensen does not consider seasonality in any of his analyses, all of which analyze changes between Q2 and Q3 of 2020.

84. Moreover, COVID likely had complex impacts on the book publishing industry that varied over time and impacted different books and formats differently:

- *Many students were at home in Spring 2020.* Parents purchased books that were either part of their children's curriculum or supplemental.<sup>228</sup> Ebook checkouts for school-assigned reading also went up.<sup>229</sup> By summertime, schools were out of session. Many students returned to school in fall 2020.
- *Closing and re-opening of libraries and brick-and-mortar stores:* On the East Coast in particular, COVID spiked in spring 2020 and declined significantly in summer 2020, permitting the re-opening of physical libraries and bookstores.<sup>230</sup> The AAP StatShot Reports show that the COVID-related surge in ebook sales slowed down by summer 2020.<sup>231</sup>

<sup>228</sup> See, e.g., Alexandra Alter, "With Kids Learning From Home, Children's Publishers a Spike," March 24, 2020, (<https://www.nytimes.com/2020/03/24/books/home-schooling-workbooks-sales-increase-virus.html>), (explaining that "[s]ales of juvenile nonfiction in the categories of education, reference and language rose by nearly 40 percent during the week ending March 14[, 2020] . . . [a]s schools across the United States shut down in an effort to slow the spread of coronavirus, millions of parents find themselves cooped up with bored, restless children [a]nd on top of feeding and entertaining their offspring, parents are suddenly expected to educate them as well"); Sevier Deposition, pp. 203-204 (example of parent purchasing subscription to authorized service providing children with curriculum books when schools stopped in-person learning in mid-March 2020).

<sup>229</sup> The Learning Counsel, "Schools' Usage of Ebooks and Audiobooks Surges in 2020," (<https://thelearningcounsel.com/article/schools%E2%80%99usage-ebooks-and-audiobooks-surges-2020>, viewed on April 28, 2022.)

<sup>230</sup> Generally speaking, it appears that: public libraries across the United States remained largely closed or open only for limited services for the first several months of the pandemic; by mid/late summer 2020, additional public libraries began to reopen or expanded services; public libraries largely did not return to pre-COVID operating status until approximately mid-202, which also varied by state and region. See, e.g., American Library Association, "American Library Association Surveys/Reports," (<https://www.ala.org/tools/research/initiatives>, viewed on April 28, 2022), (reflecting that as of mid-May 2020, 62% of libraries (including public and academic libraries) remained fully closed, with an additional 26% open only for curbside pickup and only 1% of libraries "fully open [with] no restrictions"). Bookstores began to open up by approximately early summer 2020. See, e.g., Alexandra Alter, "For Bookstore Owners, Reopening Holds Promise and Peril," May 12, 2020, (<https://www.nytimes.com/2020/05/12/books/bookstores-reopening-coronavirus.html>).

<sup>231</sup> See AAP000905, AAP000925, AAP000945, AAP000965, AAP000985, AAP001005 (reflecting that revenue for Trade title eBook sales across the book publishing industry fell from ██████████ in 2020 Q2 to ██████████ in 2020 Q3 – and that revenue across the industry for Children's & Young Adult title eBooks fell from ██████████ in 2020 Q2 to ██████████ in 2020 Q3).

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- There was a spike in interest in books related to *viruses*,<sup>232</sup> certain leisure activities such as *cookbooks and historical fiction*, children’s activity or workbooks and similar works for pre-school and K-6 aged children among other examples.<sup>233,234</sup>
- *Supply chain issues depleted inventory of some print book titles*, which affected publishers’ ability to fulfill new orders. Among other things, these supply chain issues ranged from paper shortages to printing capacity.<sup>235</sup>

85. In addition, Dr. Jørgensen and Dr. Reimers rely on the closing of the National Emergency Library<sup>236</sup> as an “exogenous event” that they suggest makes their analyses reliable.

<sup>232</sup> See, e.g., Tobias Carroll, “Pandemics: An Essential Reading List,” March 10, 2020.

(<https://www.vulture.com/article/best-pandemic-books.html>), (explaining that “Just as the film Contagion has found a second life with news of the coronavirus outbreak, so too are novels about epidemics popping up on reading lists around the country.”); Amy Manikowski, “What People Are Reading: Top Five Books Sold During the Pandemic Times,” June 2020. (<https://www.biblio.com/blog/2020/06/what-people-are-reading-top-five-books-sold-during-the-pandemic-times/>), (describing the recent popularity of fiction and nonfiction titles addressing viruses and pandemics).

<sup>233</sup> See, e.g., Kim Severson, “How the Cookbooks of 2020 Tell the Stories of Our Pandemic Kitchens,” March 2, 2021. (<https://www.nytimes.com/2021/03/02/dining/best-cookbooks-2020-pandemic.html>), (“The books America cooked from during 2020 will stand as cultural artifacts of the year when a virus forced an entire nation into the kitchen. The pandemic has been good to cookbooks. Overall sales jumped 17 percent from 2019, according to figures from NPD BookScan, which tracks about 85 percent of book sales in America.”); Heloise Wood, “The books that could flourish in this pandemic era,” May 6, 2020. (<https://www.bbc.com/culture/article/20200506-the-books-that-might-flourish-in-this-time-of-crisis>), (explaining that “[t]he solace of historical fiction” has resulted in increases in sales of these titles since March 2020, noting that “The genre could continue to flourish through troubled times, some commentators think, because it can help to anchor anxious readers with its strong sense of place and often quite traditional storytelling structure.”).

<sup>234</sup> See, e.g., Alexandra Alter, “With Kids Learning From Home, Children’s Publishers a Spike,” March 24, 2020. (<https://www.nytimes.com/2020/03/24/books/home-schooling-workbooks-sales-increase-virus.html>), (explaining that “[s]ales of juvenile nonfiction in the categories of education, reference and language rose by nearly 40 percent during the week ending March 14[, 2020] . . . [a]s schools across the United States shut down in an effort to slow the spread of coronavirus, millions of parents find themselves cooped up with bored, restless children [a]nd on top of feeding and entertaining their offspring, parents are suddenly expected to educate them as well” plus explaining that “[t]he top-selling book on Amazon at the moment . . . [is] a 320-page activity book for 3- to 5-year-olds, designed to help them master shapes, colors and letters of the alphabet, and it’s recently surged ahead of best-selling novels like ‘Where the Crawdads Sing’ and ‘Little Fires Everywhere.’”).

<sup>235</sup> See, e.g., Elizabeth A. Harris, “‘The Beginning of the Snowball’: Supply-Chain Snarls Delay Books,” October 4, 2021. (<https://www.nytimes.com/2021/10/04/books/book-publishing-supply-chain-delays.html>), (explaining that the supply chain issues that were widely publicized in 2021 actually “began in 2020, when a drop in demand meant that containers weren’t where they needed to be to move goods around the world when demand snapped back”); Alexandra Alter, “Printer Jam: Serious Supply Issues Disrupt the Book Industry’s Fall Season,” August 27, 2020. (<https://www.nytimes.com/2020/08/27/books/printing-companies-backlog-book-publishing.html?msclkid=3a0f9df8c75811ec8c3e1f4748c1efec>).

<sup>236</sup> The end of the National Emergency Library (Dr. Jørgensen) and the removal of the Works in Suit from the Internet Archive (Dr. Reimers) both took place in June 2020. See Brewster Kahle, “Temporary National Emergency Library to close 2 weeks early, returning to traditional controlled digital lending,” June 10, 2020. (<http://blog.archive.org/2020/06/10/temporary-national-emergency-library-to-close-2-weeks-early-returning-to->

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Dr. Reimers argues that the National Emergency Library “pose(d) a distinct shift in the nature of availability of a title at the Internet Archive, and such distinct shifts (rather than gradual changes) help me identify the effects of such availability on the title’s unit sales.”<sup>237</sup> Dr. Jørgensen also implies that considering an “exogenous event” (also referred to as a “natural experiment”) allows him to isolate the impact of IA’s conduct.<sup>238</sup> It is important to note that a single exogenous event can be highly correlated with other important factors happening at the time of the exogenous event. For example, as Dr. Reimers suggests, it is possible that many of the Works in Suit are in lower demand every summer, which happened to coincide with the closing of the National Emergency Library, and by looking at the quarter-over-quarter changes in checkouts between 2020Q2 and 2020Q3, Dr. Jørgensen does not control for the fact that some titles experience a drop in demand between Q2 and Q3 every year (and conversely, titles that are popular vacation reads experience an increase in demand between Q2 and Q3 every year). Neither Dr. Reimers nor Dr. Jørgensen have allowed for the possibility that exogenous events (*i.e.*, unrelated to IA’s conduct) might have affected sales or rankings, respectively. Given the evidence that several events in the recent past affected economic behavior, Dr. Reimers’ and Dr. Jørgensen’s failure to control for these events in their analyses renders their empirical models unreliable and their conclusions lacking empirical support and therefore speculative.

2. *Dr. Reimers fails to account for myriad relevant exogenous factors in her analysis of changes in sales rankings*

86. Dr. Reimer’s analyzes the impact of IA’s conduct on Amazon sales rankings of the print editions of Works in Suit (*i.e.*, retail sales), and finds that: 1) uploading the Works in Suit onto IA’s Free Ebook Website did not have a statistically significant effect;<sup>239</sup> 2) launching

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traditional-controlled-digital-lending/); Supplemental Foster Report, at ¶ 194 (“I note that IA ceased lending the 371 WIS scans in the period following Plaintiffs’ filing the complaint in this matter on June 1, 2020.”).

<sup>237</sup> Reimers Report, ¶ 37.

<sup>238</sup> “The closing of the National Emergency Library represents what economists refer to as a “natural experiment.”... To the extent that any IA loan of the Works-in-Suit acted as a competing substitute, as alleged by Plaintiffs, one would expect Plaintiffs’ purported substitution effect to result in increasing OverDrive checkouts after the closing of NEL” Jørgensen Report, ¶ 49.

<sup>239</sup> Reimers Report, ¶ 46-47.

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the National Emergency Library did not have a statistically significant effect;<sup>240</sup> 3) removing the Works in Suit from IA's Free Ebook Website worsened the Amazon rank between 1% and 2%.<sup>241</sup> Dr. Reimers concludes that "the availability of a book at Internet Archive does not hurt sales"<sup>242</sup> but for the reasons discussed below, her analysis of Amazon sales rankings cannot be relied upon to determine that IA's conduct did not impact the sales of these titles.

87. In all three analyses, Dr. Reimers does not examine sales of print and ebooks to consumers. Rather, Dr. Reimers examines changes in Amazon sales rankings, asserting that "rankings are by their very nature relative to other books, so there is no need to collect detailed sales data for a comparison group of 'similar' books."<sup>243</sup> Even ignoring the potentially significant noise introduced by examining rankings as a proxy for sales, Dr. Reimers' analysis suffers from a lack of controls for exogenous factors unrelated to, but plausibly correlated with, IA's conduct that may have affected the sales ranking measure she studies. Dr. Reimers does acknowledge that "COVID-19 pandemic may have increased the demand for books because people spent more time at home."<sup>244</sup> However, she does not discuss the potential effects the pandemic had on interest in particular genres and/or subjects (from the demand side), or constraints from the supply side at particular points in time.

88. For example, as I discussed earlier, books addressing issues of racism and racial justice became very popular during the relevant period. In fact, Dr. Reimers relies on the USA Today Bestseller List that shows a rapid growth in interest in these topics.<sup>245</sup> Therefore, the relative ranking of books on other topics necessarily decreased, including the many Works in

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<sup>240</sup> Reimers Report, ¶53. "I cannot conclude that the National Emergency Library had either a positive or negative effect on the Amazon sales rankings of print editions."

<sup>241</sup> Reimers Report, ¶49. She states that "the estimated [Amazon sales] rankings drop (worsen) almost immediately after the book's removal from the Internet Archive. That is, when the books are no longer available on the Internet Archive, their unit sales at Amazon decrease relative to other books."

<sup>242</sup> Reimers Report, ¶ 49.

<sup>243</sup> Reimers Report, ¶ 36.

<sup>244</sup> Reimers Report, ¶ 35

<sup>245</sup> For example, a review of the USA Today Best Selling lists comparing May 2020 with June/July/August/Sept 2020 shows that the top of the list was suddenly studded with books addressing the topic of race in Q3 – in particular, non-fiction works. *See* USA Today, "Best selling books list: USA TODAY's Top 150 weekly best sellers." (<https://booklist.usatoday.com/>, viewed on April 29, 2022.)

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Suit that are not non-fiction books on race.<sup>246</sup> In addition to a shift in popularity of book topics, there was also some shifting in popularity of genres in 2020 that Dr. Reimers did not investigate.<sup>247,248</sup> As certain types of books became particularly popular during the pandemic or the Black Lives Matter movement, they would have necessarily lowered the Amazon sales rank of the Works in Suit not in those categories. Dr. Reimers seems to be aware of the fact that book sales depend on “concomitant changes in demand for the particular book and for reading in general”<sup>249</sup> which includes popularity of a book’s topic<sup>250</sup> but Dr. Reimers does not take the book’s topic and its relative popularity into account in her quantitative analysis, despite their omission plausibly biasing her results.

89. In addition, as I already discussed, complex supply chain problems, such as paper shortages and warehouse staffing issues, appear to have affected the inventory and delivery of print book books,<sup>251</sup> and likely constrained the inventory of print books for select popular titles. It is therefore possible that Dr. Reimers’ analysis incorrectly attributes the observed decline in Amazon sales ranking of print books with limited or zero inventory to IA’s impact.

90. Dr. Reimers measures gross or total changes in Plaintiffs’ Amazon sales rankings that could be caused by a number of factors, resulting in likely omitted variable bias in her analysis. In Dr. Reimers own prior research, she has concluded that Amazon star ratings (*i.e.*,

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<sup>246</sup> Complaint, Exhibit A.

<sup>247</sup> “Adult nonfiction experienced a massive sales drop in March as the pandemic took hold in the United States.” Washington Post, “What the country is reading during the pandemic: Dystopias, social justice and steamy romance” ([https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44\\_story.html](https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44_story.html), viewed on April 14, 2022.)

<sup>248</sup> “The romance genre, which had been steadily declining since 2012, according to NPD, saw a boost starting in March, just as many readers began to quarantine.” Stephanie Merry & Steven Johnson, “What the Country is Reading During the Pandemic: Dystopias, Social Justice And Steamy Romance,” September 2, 2020. ([https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44\\_story.html](https://www.washingtonpost.com/entertainment/books/2020-book-trends/2020/09/02/6a835caa-e863-11ea-bc79-834454439a44_story.html).)

<sup>249</sup> Reimers Report, ¶ 34.

<sup>250</sup> “For example, a library might decide to purchase copies of a book on the history of the Olympics shortly before the start of the Olympics because it expects interest for that topic and title to increase. Then, we might see a rise in sales for the book concurrent with an increase in its library holdings. However, this positive correlation would describe a trend in interest, rather than a causal effect of library holdings on book sales.” Reimers Report, ¶ 31.

<sup>251</sup> See, e.g., Elizabeth A. Harris, “‘The Beginning of the Snowball’: Supply-Chain Snarls Delay Books,” October 4, 2021. (<https://www.nytimes.com/2021/10/04/books/book-publishing-supply-chain-delays.html>.)



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good publicity) impact sales,<sup>252</sup> and that publication of new editions and price promotions can contribute to changes in e-book demand,<sup>253</sup> yet in her report for this matter, Dr. Reimers does not consider the impact of any marketing, publicity, promotions, or release of new editions in her quantitative analysis. Omission of factors that are likely to concurrently explain changes sales, including factors that Dr. Reimers has included in her own prior research, renders her conclusions unreliable.

91. Dr. Reimers does discuss seasonality and the possibility that “Works in Suit naturally experienced a drop in their sales around the beginning of summer.”<sup>254</sup> While she does not control for seasonality in her analysis, she claims to perform a ‘placebo test’ to address the seasonality concern, which she acknowledges is inconclusive.<sup>255</sup> Notably, she doesn’t formally test the change in sales with season between her period of analysis and her placebo period, instead inappropriately relying on a visual comparison. Even if her placebo test were able to convincingly rule out seasonality as a confounding factor, it does not rule out the numerous additional factors mentioned above that likely bias her model.

92. Further, Amazon book rankings are determined by an algorithm that is purportedly susceptible to manipulation or other efforts specifically geared towards improving ranking that do not bear on the sales or revenue generated by the title.<sup>256</sup> Because Amazon is vague in describing its algorithm for determining sales rankings, it is unclear what it measures

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<sup>252</sup> See Reimers, Imke, and Joel Waldfogel, “Digitization and Pre-purchase Information: The Causal and Welfare Impacts of Reviews and Crowd Ratings,” *American Economic Review*, Vol. 111, No. 6, 1944-71 (2021), p. 1946 (2021).

<sup>253</sup> See Reimers (2016), p. 422.

<sup>254</sup> Reimers Report, ¶ 50.

<sup>255</sup> Reimers Report, ¶ 50.

<sup>256</sup> See, e.g., Marion Maneker, “Secrets of the Amazon best-seller list,” August 10, 2009. (<https://www.nbcnews.com/id/wbna32336521>), (“The desire to manipulate one's Amazon ranking has given birth to a cottage industry of fixers and fudgers who will help you increase your sales through multitiered marketing schemes or rentable e-mail lists.”).



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and whether it might correspond to sales revenue.<sup>257</sup> Dr. Reimers does not justify that her choice of Amazon rankings is a reasonable proxy for sales.

3. *Dr. Reimers analyses of the impact of uploading the Works in Suit onto Internet Archive’s Free Ebook Website and launching the National Emergency Library can only be characterized as correlational*

93. There is a limit to any conclusions from Dr. Reimers’ analyses that looks at the first and second events (uploading the Works in Suit onto IA’s Free Ebook Website and launching the NEL) because these analyses measure correlation, rather than the impact of IA’s conduct. For example, Dr. Reimers does not show that the choice to scan and upload a particular title on the Free Ebooks Website was unrelated to an increased demand for that particular title at the time, or unrelated to an expectation of potential higher demand in the future, even though this is a factor that Dr. Reimers discusses and acknowledges would be a concern.<sup>258</sup> In fact, her Figure 3 shows that there was an increase in the average Amazon sales rank approximately 3 weeks prior to CDL addition. If it were the case that the 127 Works in Suit were scanned by Internet Archive at a time when they were experiencing an increased demand, on average, Dr. Reimers failed to control for the possibility that sales would have been even higher in absence of Internet Archive’s conduct. Without an analysis that seriously considers concurrent and expected future changes in demand for a particular book title, Dr. Reimers’ conclusion of zero effect on sales from IA’s conduct is unsubstantiated.

4. *Dr. Jørgensen’s analysis of Hachette sales does not attempt to control for various relevant factors why demand and supply of books may fluctuate*

94. Dr. Jørgensen claims that Internet Archive’s ‘digitized book loans’ did not act as competing substitutes for library or consumer sales that Plaintiff Publishers would otherwise

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<sup>257</sup> Amazon, “Amazon Best Sellers Rank.”

(<https://www.amazon.com/gp/help/customer/display.html?nodeId=GGGMZK378RQPATDJ>, viewed on April 28, 2022.)

<sup>258</sup> Dr. Reimers hypothetically states that changes in the availability of a title at the Internet Archive can provide a setting that avoids “common title-level trends”, since “titles may have been made available at the Internet Archive following the five-year-post-publication rule imposed by the Internet Archive rather than due to any expectations in demand.” Reimers Report, ¶ 32. Nowhere in the report does Dr. Reimers establish that this was the case.

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have made based on two main analyses: 1) OverDrive lending (the number of ebook checkouts) for the Works in Suit, and 2) Hachette retail and total sales, for print and ebooks.<sup>259</sup>

95. It is important to note that Dr. Jørgensen does not even have a model. As I discussed earlier, to analyze the impact of IA’s conduct on sales, one would have to develop an empirical model that is capable of modeling the effect of causal factors on sales and distinguishing between the causal effect of IA’s conduct and other causal factors unrelated to IA’s conduct over the same period of interest. In fact, in absence of a model, Dr. Jørgensen does not even look at the particular sales trajectories of each of the individual Works in Suit, such as the long-declining sales of “All the President’s Women.”

96. One thing that Dr. Jørgensen could have done, but did not, is attempt to control for various additional reasons why Hachette’s paperback and ebook sales for their 23 Works in Suit, may have fluctuated between Q2 and Q3 2020. Dr. Jørgensen acknowledges that “students may need to read specific titles to complete their assignments” but he makes no attempt to include fluctuations in demand based on school adoption and seasonality in his analysis.<sup>260</sup> For example, Dr. Jørgensen does not investigate why some of the Works in Suit published by Hachette experienced a substantial decline in paperback and ebook sales, in Q3 2020 far in excess of the decrease in IA’s loans, which suggests other factors (rather than Internet Archive’s conduct) are plausibly the reason that could explain the observed decrease in Hachette sales, such as titles shown below.<sup>261</sup>

<b>Title</b>	<b>Decrease in Internet Archive Loans</b>	<b>Decrease in Hachette Paperback Sales (All Accounts)</b>	<b>Decrease in Hachette Ebook Sales (All Accounts)</b>
The Catcher in the Rye	2,508	4,485	6,544
Leviathan Wakes	144	3,332	446
Invisible	22	1,543	4,614

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<sup>259</sup> Jørgensen Report, ¶ 8.

<sup>260</sup> Jørgensen Report, ¶ 16.

<sup>261</sup> Jørgensen Report, Exhibits 16b and 17b.

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5. *Dr. Jørgensen's analysis of OverDrive lending suffers from many of the flaws common to the sales/rankings analyses*

97. Dr. Jørgensen also relies on his analysis of OverDrive lending to conclude that Internet Archive's 'digitized book loans' did not act as competing substitutes for library or consumer sales that Plaintiff Publishers would otherwise have made.<sup>262</sup> This analysis suffers from similar flaws as Dr. Jørgensen's analysis of Hachette sales and Dr. Reimers' analysis of Amazon sales rankings, which renders his conclusions unsubstantiated.

98. Dr. Jørgensen concludes that a general decline in OverDrive checkouts between Q2 and Q3 of 2020 is not consistent with the possibility that IA's digitized book loans acted as competing substitutes for OverDrive lending.<sup>263</sup> In reaching such a conclusion, he does not consider the likely confounding effect of the joint impact of *e.g.* COVID, school adoption, and seasonality (just to select three factors of many that may be relevant during this period). Consider *The Lion, the Witch, and the Wardrobe*, the most popular Hachette title according to Dr. Jørgensen's Exhibit 14, which experienced a [REDACTED] decline in OverDrive checkouts between Q2 and Q3 2020. Changes due to COVID alone could explain this finding. To see this, consider that in Q2 of 2019, there were a total of [REDACTED] checkouts. By contrast, in Q3 of 2020, with various disruptions due to the pandemic, there were nearly twice as many library ebook checkouts [REDACTED]. Hence, 2020 saw unusually high library ebook checkouts in general due to the pandemic, suggesting that further changes in pandemic conditions could likely have a significant impact on such checkouts. Therefore, it is highly plausible that it wasn't the end of NEL, but rather the fact that some libraries and bookstores had reopened by summer 2020 that explains the [REDACTED] decline in ebook library checkouts between Q2 and Q3 2020 for this title; Dr. Jørgensen does not consider this potential explanation. Consequently, Dr. Jørgensen's analysis does not rule out the possibility that had IA's NEL continued, OverDrive checkouts for this title could have been even lower.<sup>264</sup>

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<sup>262</sup> Jørgensen Report, ¶ 8.

<sup>263</sup> Jørgensen Report, ¶ 51-53. Note that Dr. Jørgensen appears to have analyzed only twenty Works in Suit: ten with the most IA loans during the NEL period, and ten with the least IA loans during the NEL period.

<sup>264</sup> See Spreadsheet produced by OverDrive, "OverDrive\_Supp\_002."

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99. Moreover, Dr. Jørgensen does not consider concurrent trends in reading interests and book purchases. For the summer 2020 period, for example, Dr. Jørgensen does not consider the increased popularity of topics related to the pandemic (*e.g.*, viruses) and the Black Lives Matter movement, and lower popularity of other topics. Dr. Jørgensen mentions that circulation of Toni Morrison’s *The Bluest Eye* increased by [REDACTED] checkouts between the second and third quarter of 2020. However, Dr. Jørgensen fails to consider how the Black Lives Matter movement and an interest in writing by Black authors like Toni Morrison may have driven this demand.<sup>265</sup>

#### **VIII. INTERNET ARCHIVE’S EXPERTS MISCHARACTERIZE THE BOOK MARKET AND TRIVIALIZE THE SCOPE OF INTERNET ARCHIVE’S CONDUCT**

100. As I discussed above, none of Internet Archive’s experts are able to demonstrate that its conduct did not cause economic harm to Plaintiff Publishers and their authors (*see* Section VI). Relatedly, my analysis in Section V discusses the numerous ways in which Internet Archive’s Free Ebook Website did create market harm and continues to do so.

101. Dr. Reimers and Dr. Jørgensen also present analyses that mischaracterize the book market and trivialize the scope of Internet Archive’s conduct in multiple ways. First, Dr. Reimers is incorrect in her description of the library market as “small” and Dr. Jørgensen underestimates Plaintiff Publishers’ revenues from library ebooks collected through Overdrive. The library market is important to Plaintiff Publishers, and they earn substantial revenues from licensing and sale of books to libraries. Second, Dr. Jørgensen is incorrect to compare Internet Archive’s loans in relation to OverDrive lending because relative statistics obfuscate the total volume of Internet Archive’s loans. Third, Dr. Reimers’ three analyses of the “life-cycle of a title” and statistics relative to “lifetime sales” of a title are fundamentally erroneous and in fact establish that there were potential revenues that Plaintiff Publishers lost as a result of Internet Archive’s actions. Setting aside the fundamental errors in Dr. Reimers’ analysis, her calculation that by the time a title was listed on IA’s Free Ebook Website, its sales relative to its lifetime sales amounted to only 10%, is incorrect. As I discussed in Section IV.C., plaintiffs’ sales of

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<sup>265</sup> *See* Jørgensen Report, ¶ 51.

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backlist book titles are substantial in volume and are important because they provide a steady revenue stream that allows publishers to undertake risky publishing of new titles.

**A. Dr. Reimers and Dr. Jørgensen improperly trivialize the library market**

102. Plaintiff Publishers earn millions of dollars a year in the library market, and this lawsuit illustrates the importance to the plaintiffs of protecting their copyrights so that they will continue to be able to license ebooks to libraries.

103. Dr. Reimers suggests that the library market is trivial or unimportant for Plaintiff Publishers by stating that “libraries make up a small fraction of the publishing market.”<sup>266</sup> The size of the library market, relative to the total market, does not justify or mitigate IA’s conduct. A variety of data, including data cited in Dr. Reimers’ own report, demonstrate that Plaintiff Publishers earn substantial revenues in the library market from sales and licensing of print and ebooks. Moreover, ebook revenues have been increasing in size and therefore importance over the last decade.<sup>267</sup> Even assuming for the sake of argument that library expenditures range between 4% to 13% of total publisher revenues for members of the Association of American Publishers, as Dr. Reimers alleges,<sup>268</sup> she admits that library expenditures in 2019 for print and electronic works amounted to approximately \$754 Million.<sup>269</sup>

104. Dr. Jørgensen asserts that Overdrive collected [REDACTED] for the Works in Suit and, given Overdrive’s average publisher commission, he estimates that Plaintiff Publishers likely earned between [REDACTED] via Overdrive for the Works in Suit in 2017-2020.<sup>270</sup> Dr. Jørgensen does not use the actual discounts off of the Library Digital List Price set forth in the governing agreements or terms of sale between the four Plaintiffs and Overdrive<sup>271</sup> or the Plaintiffs’ actual sales records, and therefore his estimate is inaccurate. Dr.

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<sup>266</sup> Reimers Report, ¶¶ 33.

<sup>267</sup> See Summary of Opinions.

<sup>268</sup> Reimers Report, ¶30.

<sup>269</sup> “[L]ibrary expenditures on print formats amounted to \$497 million in 2019” and “library expenditures on electronic content was reported at \$257.1 million.” Reimers Report, ¶29.

<sup>270</sup> Jørgensen Report, ¶ 35.

<sup>271</sup> See HC0011420-24; PRH0007002; HACHETTE0010980-82.

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Jørgensen underestimates Plaintiff Publishers’ revenues from library ebooks and I discuss the more appropriate alternative estimate based on Plaintiffs’ actual sales records below.

105. Hachette’s sales records show that it earned [REDACTED] in revenue from OverDrive for the Works in Suit between 2017 and 2020.<sup>272</sup> Penguin Random House’s sales records show that it earned [REDACTED] in revenue from OverDrive for the Works in Suit from 2017-2020.<sup>273</sup> HarperCollins produced data show that it received [REDACTED] in revenue from OverDrive for the Works in Suit from approximately 2003 to 2020; implying average annual revenues of [REDACTED], which correspond to [REDACTED] for the three-year period between 2017 and 2020.<sup>274</sup> Together, the three publishers earned at least approximately \$1.56 million through OverDrive for sales of the Works in Suit between 2017 and 2020. Accordingly, Dr. Jørgensen’s estimate underestimates the publishers’ revenue by approximately [REDACTED].

**B. Dr. Jørgensen’s comparison of Internet Archive’s conduct to OverDrive lending is misleading and irrelevant**

106. Dr. Jørgensen admits that, by his count, the Internet Archive distributed 57,000 copies of the Works in Suit to its users from 2017-2020.<sup>275</sup> Nevertheless, Dr. Jørgensen opines that Internet Archive’s loan volume was “small” relative to Overdrive-based library lending.<sup>276</sup> The term “small” as used by Dr. Jørgensen in this context is unscientific and meaningless. One could similarly postulate that the theft of 2% of the jewelry in the jewelry store is a “small” amount, but that shouldn’t be relevant to a determination of whether or not the thief broke the law.

107. Moreover, according to Dr. Jørgensen’s analysis, there was a huge variability in Internet Archive’s relative checkout volume among the book titles, suggesting that some authors

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<sup>272</sup> See HACHETTE0002474 (2017-2019 data); HACHETTE0002475 (2020 data).

<sup>273</sup> See PRH0072389. Limited to U.S. sales.

<sup>274</sup> See HC0003510. The annual estimate of [REDACTED] is [REDACTED] divided by 18 years of data, 2003-2020 inclusive. Given the increased popularity of library ebooks in recent years, this estimate likely undercounts the HarperCollins Overdrive revenues from 2017-2020.

<sup>275</sup> Jørgensen Report, ¶ 8. Dr. Foster found that between March 2017 and September 2, 2020, there were a total of 46,305 total loans of the Works in Suit. See Foster Report, Exhibit T5.

<sup>276</sup> Jørgensen Report, p. 14.

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might be impacted more heavily than the average provided by Dr. Jørgensen. For example, IA loans for *Catcher in the Rye* were [REDACTED] of OverDrive checkouts, [REDACTED] for *All the President’s Women*, and [REDACTED] for *The Lion, the Witch, and the Wardrobe*.<sup>277</sup>

108. Further, Dr. Jørgensen’s characterization of Internet Archive’s loan volume as “small” does not consider the 33,003 Works titles published by the Plaintiffs on the Free Ebook Website in digital and print form, or recent and future anticipated growth of Internet Archive, including if its conduct were to become widespread. The three-month period of the National Emergency Library, when Internet Archive abandoned any limits on the number of copies of a work that it would lend at a given time, is informative about the scope of Internet Archive’s activities if its conduct were to scale up or become widespread. Dr. Jørgensen’s report indicates that during the three-month period of the National Emergency Library, the relative volume of Internet Archive’s unauthorized distributions was, on average, [REDACTED] of OverDrive checkouts.<sup>278</sup> This proportion varies by title, and for some titles, it is considerably above the average. For example, “The Catcher in the Rye” experienced a sharp increase in the proportion of IA loans to OverDrive checkouts during the NEL period, going from a ratio of [REDACTED] to a ratio of [REDACTED] during NEL. Moreover, according to Dr. Jørgensen’s own analysis, in April 2020, many of the Works in Suit were checked out more times through Internet Archive than through OverDrive, including *The Catcher in the Rye*, *Lord of the Flies*, *The Lion, the Witch, and the Wardrobe*, and a number of educational/academic titles.<sup>279</sup>

**C. Dr. Reimers is incorrect to trivialize revenues from titles published more than five years ago**

109. In a similar vein, Dr. Reimers argues that the “vast majority of titles [IA infringed] are digitized and made available for borrowing ... at least five years after their

<sup>277</sup> [REDACTED] for *Catcher in the Rye* is calculated as 3,451 IA loans relative to [REDACTED] OverDrive checkouts. [REDACTED] for *All the President’s Women* is calculated as 73 IA loans relative to [REDACTED] OverDrive checkouts. [REDACTED] for *The Lion, the Witch, and the Wardrobe* is calculated as 5,712 IA loans relative to [REDACTED] OverDrive checkouts. See Jørgensen Report, Exhibit 6a.

<sup>278</sup> Jørgensen Report, ¶ 36.

<sup>279</sup> Jørgensen Report, Exhibit 10 (in April, 1,296 IA Loans for *The Catcher in the Rye* of exceeded [REDACTED] OverDrive checkouts); Exhibit 11 (in April, 1,510 IA loans for *The Lion, the Witch, and the Wardrobe* exceeded [REDACTED] OverDrive checkouts); Exhibit 12 (in April, 1,697 IA loans for *Lord of the Flies* exceeded [REDACTED] OverDrive checkouts); Exhibit 13 (*Oil Painting for Dummies*, *Comparative Religion for Dummies*, *Basic Physics*, and others).



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original publication date,” which is “well past the peak of their sales.”<sup>280</sup> To arrive at this conclusion, Dr. Reimers performs three analyses of the life-cycle of a title: (1) sales decay of USA Today bestsellers; (2) Plaintiff Publishers company-wide data, which she does not engage with; and (3) Plaintiff Publishers’ sales of the Works in Suit, which she claims “account for up to 90% of lifetime sales.”<sup>281</sup> Such analyses are irrelevant to the question of IA’s market harm and obfuscate the total magnitude of revenues that Plaintiff Publishers earn from titles originally published more than five years ago.

110. The book-level premise of all three analyses that Dr. Reimers performs, which presents sales relative to total lifetime sales of that title, and her overall finding that titles only have a small percent of lifetime sales many years after original publication date is irrelevant to issues in this matter. It ignores the fact that some books continue to have sales for many decades,<sup>282</sup> or that some books spike later in their life cycle (such as lesser-known books made into movies or early undiscovered works by later successful authors). For example, consider some of the Penguin Random House books that Dr. Reimers analyzed. *Daring Greatly*, originally published in 2012, had just as many sales, at [REDACTED], in 2016-2020 (last 4 years of available data) as in the first five years of since publication in 2012; it was made into a Netflix Special *Call to Courage* in 2019<sup>283</sup> and had peak sales of nearly [REDACTED] that year.<sup>284</sup> *A Dance with Dragons* brought in considerable revenue even if peak sales occurred in the first couple of years after a book’s publication: published in 2011, this title brought in [REDACTED] in 2011-2015 and [REDACTED] in 2016-2020. A book-level analysis of the book’s “life-cycle” for this title ignores the fact that this title was bringing in an average of [REDACTED] a year in 2016-2020

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<sup>280</sup> Reimers Report, ¶ 20. Dr. Reimers also states that “analysis of any possible effects that the Internet Archive might have on print or ebook sales needs to incorporate the timing of the digitization of a title relative to its original publication.”

<sup>281</sup> Reimers Report, ¶9.

<sup>282</sup> Dr. Reimers ignores steady-selling titles because they were initially published long before the period of time covered by the data produced by the Plaintiffs. See, e.g., *Lord of the Flies* (published in 1954), *House on Mango Street* (1983), *The Bluest Eye* (1970), *Song of Solomon* (1977), *Catcher in the Rye* (1951), *The Lion, the Witch and the Wardrobe* (1950), *Little House in the Big Wood* (1932), *Their Eyes Were Watching God* (1937), and *Little House on the Prairie* (1935). See also footnote 161 for 2010-2020 net sales data for these titles.

<sup>283</sup> Brooker, Danielle, “Why You Need to Watch The New Brene Brown Netflix Special Immediately,” *Forbes*, April 29, 2019. (<https://www.forbes.com/sites/daniellebrooker/2019/04/29/why-you-need-to-watch-the-new-brene-brown-netflix-special-immediately/?sh=e799abf3f7db>.)

<sup>284</sup> PRH0072389.

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likely in part because of the *Game of Thrones* TV series which aired in 2011–2019 and led to increased sales.<sup>285,286</sup>

111. Data produced by Plaintiff Publishers, and cited by Dr. Reimers,<sup>287</sup> illustrates the importance of backlist titles to the Plaintiffs. For example, in 2020, 35% of Hachette’s revenues and 66% of HarperCollins’ unit sales were associated with backlist titles.<sup>288</sup> However, she implies that backlist titles are not important to Publishers’ overall revenue and profit: “the share of each individual book’s revenues that occurs in the first year is likely much larger than the share of a publisher’s sales across its catalog that is attributed to books that are less than one year old”<sup>289</sup> because “only a small fraction of each publisher’s catalog was published in the past year.”<sup>290</sup> Dr. Reimers’ statistics at the level of each individual book are irrelevant to the question of potential harm that Internet Archive’s infringement caused Plaintiff Publishers in the form of lost sales because it ignores the fact that backlist titles, including titles originally published more than five years ago, in the aggregate, are significant drivers of Plaintiff Publishers’ revenue and business model and represent economic incentives that are necessary to encourage publication and dissemination of new creative works.

112. In fact, Dr. Reimers’ own evidence of positive (non-zero) sales at least five years after publication—for USA Today list bestsellers, for all books published by Plaintiffs, and for

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<sup>285</sup> PRH0072389.

<sup>286</sup> Robehmed, Natalie, “Inside George R. R. Martin’s Earnings Through the Years,” *Forbes*, June 15, 2016. (<https://www.forbes.com/sites/natalierobehmed/2016/06/15/inside-george-r-r-martins-earnings-through-the-years/?sh=1522bae44a5f>.)

<sup>287</sup> Reimers Report, ¶ 25; HACHETTE0012377; HC0030132; PRH0072194.

<sup>288</sup> “Hachette reports that between 2017 and 2019, the total share of revenues accounted for by titles published at most two years prior was between 70% and 73%, and the share fell to 65% in 2020.” Consequently, in 2020, the share of Hachette’s titles published more than two years prior is 35% (100%-65%). Reimers Report, ¶ 25; *see also* HACHETTE0012377. “HarperCollins reports that sales of books that were published less than a year prior among print books accounted for between 37% and 40% of all units sold between 2017 and 2019, and this fraction dropped to 34% in 2020”. Therefore, HarperCollins’ share of titles published more than a year ago was 66% (100%-34%) in 2020. Reimers Report, ¶ 25; *see also* HC0030132. At Penguin Random House, backlist titles accounted for 48% to 57% in 2017–2020, if “Penguin Random House reports that between 2017 and 2019 books published less than a year prior accounted for 52% to 47%, and 43% in 2020.” Reimers Report, ¶ 25; *see also* PRH0072194.

<sup>289</sup> Reimers Report, ¶¶ 9, 25.

<sup>290</sup> Reimers Report, ¶ 25.

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the Works in Suit—establishes that there were potential sales that Plaintiff Publishers lost as a result of Internet Archive’s actions.

113. Dr. Reimers also provides an analysis of best seller rankings provided by USA Today, and this analysis is not relevant to the question of impact of IA’s conduct for the same reasons a book-level premise is inappropriate and obfuscates revenue volume of backlist books in aggregate. Moreover, this analysis did not even consider titles at issue in this case.

**D. The “life cycle” calculations presented by Dr. Reimers are flawed**

114. Setting aside the inappropriate premise of “life cycle” calculations and their irrelevance to harm caused by Internet Archive’s Free Ebook Website, the calculations themselves are flawed. For example, Dr. Reimers finds that annual sales of bestsellers and of the Works in Suit in the first five years after an edition’s publication “account for up to 90% of lifetime sales.”<sup>291,292</sup> As an initial matter, the Works in Suit are all still on sale and therefore Dr. Reimers cannot calculate the “lifetime sales” for any title. Her choice of statistic (sales in the first five years after publication relative to “lifetime sales”) is flawed. Even if one were to consider the share of sales in the first 5 years statistic informative, which it isn’t, it will mechanically decrease over time as more years of data become available.

115. Moreover, the data point she presents is a miscalculation and based on too small of a sample to draw broad conclusions from. Dr. Reimers draws her conclusions primarily from a review of the Penguin Random House sales records for the Works in Suit<sup>293</sup> and agrees that “these numbers are based on only a few editions” that were initially published in 2010. Only *two* titles were originally published by Penguin Random House in 2010: “Who is Jackie Robinson” and “Theodore Boone: Kid Lawyer” and therefore this is too small of a sample to draw broad conclusions from. It is inappropriate to draw a conclusion for 127 Works in Suit from a sample of two titles. Moreover, the 90% statistic is a miscalculation. To arrive at the 90% statistic, Dr.

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<sup>291</sup> Reimers Report, ¶9.

<sup>292</sup> Dr. Reimers also reaches this conclusion based on her analysis of bestsellers: “my analyses suggests that – at least for titles that enter the Top 150 bestseller lists and for most of the Works in Suit – around 90% of their sales occur in the first five years after their publication.”

<sup>293</sup> See PRH0072389.

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Reimers: incorrectly includes editions of titles first published in earlier years;<sup>294</sup> analyzes sales during the first six (not five) years relative to sales during the first eleven years (which Dr. Reimers refers to as lifetime sales, and they are not); and omits sales of audiobooks and other formats. This “90%” statistic also counts the number of books (units), not revenue. It would be more appropriate to consider revenue and all formats to discuss market harm. *Theodore Boone: Kid Lawyer* for example, brought in [REDACTED] in 2010-2014, and [REDACTED] in 2015-2019 (with [REDACTED] in the first five of the ten years since publication); *Who Was Jackie Robinson* brought in [REDACTED] in revenue from 2010-2014 and [REDACTED] from 2015-2019, (with [REDACTED] of revenue in the first five of ten years).<sup>295</sup> For these two titles, 2010-2014 sales across all formats were [REDACTED] of 2010-2019 sales; not “90%” as Dr. Reimers claims.

## IX. CONCLUSION

116. Economic incentives are essential to encourage the creation of artistic works (including books, music, film, and other artistic creations) and maintaining well-functioning markets for creative works. One aspect of properly conceived economic incentives is that rightsholders (authors and publishers) have the opportunity to earn compensation from the sale of their creative works. To this end, it is important for rightsholders to have the exclusive right to determine, for the term of copyright: the format in which their works are offered to the public; whether to license or sell their works; marketing and distribution strategies; pricing; and what terms and conditions to impose for each format and channel, to the extent allowed by law, including restrictions (if any) on reproduction, sharing, and distribution.

117. For more than a decade, the Plaintiff Publishers, in partnership with library aggregators and libraries, have contributed to the establishment of a market for the promotion, distribution and licensing of ebooks (including the Works in Suit) to libraries, and the loaning of

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<sup>294</sup> Dr. Reimers includes 6 other titles published prior to 2010: *Eat Pray Love* (title published in 2006), *Fallen* (2009), *If I Stay* (2009), *The Innocent Man* (2006), *Scat* (2009), and *Short History of Nearly Everything* (2003), that had editions published in 2010. Dr. Reimers’ objective was to describe “the commercial life cycle of a book relative to the date of publication” (¶ 6) and she appears to have confused the date of the publication of a book with date of the publication of a particular edition of a book.

<sup>295</sup> *Theodore Boone: Kid Lawyer* was published in May 2010 and *Who Was Jackie Robinson* was published in December 2010. If I do a partial year adjustment, [REDACTED] of *Theodore Boone: Kid Lawyer*’s revenue was made in the first five years of publication and [REDACTED] of *Who Was Jackie Robinson*’s revenue was made in the first five years of publication. PRH0072389.

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ebooks to library patrons. Market statistics, such as library lending volumes, publisher sales, and readership, among others, indicate a well-functioning market. Internet Archive conflates the print and ebook formats. This is fundamentally flawed; print books and ebooks differ in meaningful ways that are important to this case and have different characteristics that necessitate ebook terms and conditions and pricing that differ from those of print books. Internet Archive has caused and continues to cause economic harm to Plaintiff Publishers and authors. Internet Archive's conduct, if allowed to continue, harms not only rightsholders but also consumers because it disrupts and reduces the incentives to create. Because IA's conduct harms rightsholders and consumers, it cannot be in the public interest. IA's experts do not demonstrate that its actions did not create market harm. Further, Dr. Reimers' and Dr. Jørgensen's statements regarding the size of the market are misleading and do not justify IA's conduct.

## Appendix A

### CV

#### JEFFREY T. PRINCE

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#### PERSONAL INFORMATION

Born: April 29, 1976 at Cincinnati, OH  
Citizenship: USA  
Married to Ann Prince  
Children: Katherine Prince, Elizabeth Prince, Henry Prince

#### EDUCATION

Ph.D.: Economics, Department of Economics, Northwestern University, 2004.  
Dissertation Title: The Diffusion of Durable Information Technology Products.  
M.A.: Economics, Department of Economics, Northwestern University, 2000.  
B.A.: Economics, Miami University, 1998, *Summa Cum Laude*.  
B.S.: Mathematics/Statistics, Miami University, 1998, *Summa Cum Laude*.

#### FIELDS OF SPECIALIZATION

Primary: Industrial Organization  
Secondary: Applied Econometrics, Strategy, Regulation

#### ACADEMIC POSITIONS HELD

Professor of Business Economics and Public Policy (with tenure), Kelley School of Business, Indiana University, 2017-present.

Harold A. Poling Chair in Strategic Management, Kelley School of Business, Indiana University, 2015-present.

Chairperson, Department of Business Economics and Public Policy, Kelley School of Business, Indiana University, 2016-2019 & 2020-present.

Co-Director, Kelley Institute for Business Analytics, 2016-present.

Faculty Affiliate, Indiana University Data Science Program, 2018-present.

Advisory Committee Member, Indiana University Center for Survey Research, 2018-present.

University Fellow at the Technology Policy Institute, 2021-present.

Chief Economist, Federal Communications Commission, 2019-2020.

Associate Professor (with tenure) of Business Economics and Public Policy, Kelley School of Business, Indiana University, 2010-2017.

Visiting Scholar, Strategy Department, Kellogg Graduate School of Management, Northwestern University, Summer and Fall, 2015.

Visiting Scholar, Center of Business and Public Policy, McDonough School of Business, Georgetown University, Fall, 2015.

Cathie and Jerry Anderson Faculty Fellow, Kelley School of Business, Indiana University, 2013-2015.

Assistant Professor, Applied Economics and Management, Cornell University, 2004-2010 (promoted to Associate with tenure, July, 2010).

#### **NONACADEMIC EXPERIENCE**

National Security Agency, Cryptologic Mathematician in Director's Summer Program, Fort George G. Meade, Maryland, Summer 1998.

UNEXT, Consultant and Co-author for Online Masters Business Course in Vertical Integration, Chicago, Illinois, Summer 2001.

Nationwide Insurance, Actuarial Intern, Columbus, Ohio, Summer 1997.

#### **EDITORIAL POSITIONS**

Co-editor, *Journal of Economics and Management Strategy*, 2015-present.

Editorial Board member, *Information Economics and Policy*, 2008-present.

Co-editor, *Journal of Economics and Management Strategy Special Edition on Digital Transformation and the Business Revolution*, 2022 (expected).

#### **BOOKS**

*Managerial Economics and Business Strategy, 10<sup>th</sup> Edition*, with Michael R. Baye, McGraw-Hill, 2021.

*Predictive Analytics for Business Strategy: Reasoning from Data to Actionable Knowledge*, McGraw-Hill, 2019.

*Managerial Economics and Business Strategy, 9<sup>th</sup> Edition*, with Michael R. Baye,



McGraw-Hill, 2017.

*Managerial Economics and Business Strategy*, 8<sup>th</sup> Edition, with Michael R. Baye, McGraw-Hill, 2014.

## WORKING PAPERS

“Optimal Promises: Application of a General Framework to Airline Schedule Times”, with Daniel Simon, 2020, under review. ([Working version at SSRN](#))

“The Effect of International Travel on the Spread of Covid-19 in the U.S.”, with Daniel Simon, 2020, under review. ([Working version at SSRN](#))

“The Effect of Domestic Travel on the Spread of Covid-19 in the U.S.”, with Daniel Simon, 2021, under review. ([Working version on SSRN](#))

## REFEREED PUBLICATIONS

“How Much is Privacy Worth Around the World and Across Platforms?”, with Scott Wallsten, forthcoming in the *Journal of Economics and Management Strategy*. ([Working version at SSRN](#))

“Mobile Internet Usage and Usage Based Pricing”, with Shane Greenstein, *Journal of Economics and Management Strategy*, 30, 4, pp. 760-783, 2021. ([Working version at SSRN](#))

“Economics at the FCC: 2019-2020”, with Allison Baker, Patrick Brogan, Octavian Carare, Nicholas Copeland, Patrick DeGraba, Steven Kauffman, Paul LaFontaine, Catherine Mataves, Sean Sullivan, Patrick Sun, and Emily Talaga, *Review of Industrial Organization*, 57, pp. 827-858, 2020.

“The Persistence of Broadband User Behavior: Implications for Universal Service and Competition Policy”, with Andre Boik and Shane Greenstein, *Telecommunications Policy*, 43, 8, 2019. ([Available at SSRN](#)). ([NBER working paper No. w22427](#)). Extended working version titled: Empirical Economics of Online Attention.

“A Paradigm for Assessing the Scope and Performance of Predictive Analytics”, *Information Economics and Policy*, 47, pp. 7-13, 2019. ([Available at SSRN](#)).

“Distinguishing Bandwidth and Latency in Households’ Willingness-to-Pay for Broadband Internet Speed,” with Yu-Hsin Liu and Scott Wallsten (lead article), *Information Economics and Policy*, 45, pp. 1-15, 2018. ([Available at SSRN](#)).

“Does Competition Lead to Agglomeration or Dispersion in EMR Vendor Decisions?”,

with Seth Freedman and Haizhen Lin, *Review of Industrial Organization*, 53, 1, 57-79, 2018. ([Working version at SSRN](#)).

“Information Technology and Patient Health: Analyzing Outcomes, Populations, and Mechanisms”, with Seth Freedman and Haizhen Lin, *American Journal of Health Economics*, 4, 1, 51-79, 2018. ([Working version at SSRN](#)). ([NBER working paper No. w21839](#))

“Measuring Consumer Preferences for Video Content Provision via Cord-Cutting Behavior”, with Shane Greenstein, (lead article) *Journal of Economics and Management Strategy*, 26, 2, 293-317, 2017. ([Working version at SSRN](#)).

“The Impact of Mergers on Quality Provision: Evidence from the Airline Industry”, with Daniel Simon, *Journal of Industrial Economics*, 65, 2, 336-362, 2017. ([Working version at SSRN](#)).

“The Effect of Competition on Toxic Pollution Releases”, with Daniel Simon, *Journal of Environmental Economics and Management*, 79, 40-54, 2016. ([Working version at SSRN](#)).

“Determinants of Private Long-Term Care Insurance Purchase in Response to the Partnership Program”, with Haizhen Lin, *Health Services Research*, 51, 2, 687-703, 2016. ([Working version at SSRN](#)).

“Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines’ On-Time Performance”, with Daniel Simon, *Management Science*, 61, 2, 372-390, 2015. ([Working version at SSRN](#)).

“Does Service Bundling Reduce Churn?”, with Shane Greenstein, *Journal of Economics and Management Strategy*, 23, 4, 839-875, 2014. ([Working version at SSRN](#)).

“Indirect Network Effects and the Quality Dimension: A Look at the Gaming Industry”, with Jin-Hyuk Kim and Calvin Qui, *International Journal of Industrial Organization*, 37, 6, 99-108, 2014. ([Working version at SSRN](#)).

“Is Dual Agency in Real Estate a Cause for Concern?”, with Vrinda Kadiyali and Daniel Simon, *Journal of Real Estate Finance and Economics*, 48, 1, pp. 164-195, 2014. ([Working version at SSRN](#)).

“The Impact of the Partnership Long-term Care Insurance Program on Private Coverage”, with Haizhen Lin, *Journal of Health Economics*, 32, 6, pp. 1205-1213, 2013. ([Working version at SSRN](#)).

“Racial Bias in Expert Quality Assessment: A Study of Newspaper Movie Reviews”,

- with Lona Fowdur and Vrinda Kadiyali, *Journal of Economic Behavior and Organization*, 84, 1, pp. 292-307, 2012. ([Working version at SSRN](#))
- “The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies”, with Claudio Lucarelli and Kosali Simon, *International Economic Review*, 53, 4, pp. 1155-1177, 2012. ([Working version at SSRN](#))
- “Relating Inertia and Experience in Technology Markets: An Analysis of Households’ Personal Computer Choices”, *Applied Economics*, 43, 29, pp. 4501-4514, 2011. ([Working version at SSRN](#))
- “Are Risk Preferences Stable across Contexts? Evidence from Insurance Data”, with Levon Barseghyan and Joshua Teitelbaum, *American Economic Review*, 101, 2, pp. 591-631, 2011. ([Working version at SSRN](#))
- “Is Time Inconsistency Primarily a Male Problem?”, with Dan Shawhan, (lead article) *Applied Economics Letters*, 18, 6, pp. 501-504, 2011. ([Working version at SSRN](#))
- “Has the Internet Accelerated the Diffusion of New Products?”, with Daniel Simon, *Research Policy*, 38, 8, pp. 1269-1277, 2009. ([Working version at SSRN](#))
- “How Do Households Choose Quality and Time to Replacement for a Rapidly Improving Durable Good?”, *International Journal of Industrial Organization*, 27, 2, pp. 302-311, 2009. ([Working version at SSRN](#))
- “Multi-market Contact and On-Time Performance in the US Airline Industry”, with Daniel Simon, *Academy of Management Journal*, 52, 2, pp. 336-354, 2009. ([Working version at SSRN](#))
- “Repeat Purchase amid Rapid Quality Improvement: Structural Estimation of the Demand for Personal Computers”, (lead article) *Journal of Economics and Management Strategy*, 17, 1, pp. 1-33, 2008. ([Working version at SSRN](#))
- “Internet Adoption and Usage Patterns are Different: Implications for the Digital Divide”, with Avi Goldfarb, (lead article) *Information Economics and Policy*, 20, 1, pp. 2-15, 2008. (Listed as the #1 most cited article for this journal since 2008: <http://www.journals.elsevier.com/information-economics-and-policy/most-cited-articles/>). ([Working version at SSRN](#))
- “The Beginning of Online/Retail Competition and Its Origins: An Application to Personal Computers”, *International Journal of Industrial Organization*, 25, 1, pp. 139-156, 2007. ([Working version at SSRN](#))

“The Diffusion of the Internet and the Geography of the Digital Divide in the United States”, with Shane Greenstein, in (eds) Robin Mansell, Chrisanthi Avgerou, Danny Quah, and Roger Silverstone, The Oxford Handbook of Information and Communication Technologies, Oxford University Press, pp. 168-195, 2007. ([NBER working paper No. W12182](#))

#### **NON-REFEREED PUBLICATIONS**

“Empirical Evidence of the Value of Privacy”, with Scott Wallsten, *Journal of European Competition Law and Practice*, 12, 8, pp. 648-654, 2021.

“The Economics of Digital Platforms: A Guide for Regulators”, with Michael R. Baye, Global Antitrust Institute Report on the Digital Economy, 2020. ([Available at SSRN](#))

“FCC Comments on Vertical Merger Guidelines”, with Giulia McHenry, Patrick DeGraba, Eric Ralph, Catherine Matraives, Eugene Kiselev, and Aleksandr Yankelevich, February, 2020.

“Does Original Content Help Streaming Services Attract More Subscribers?”, *Harvard Business Review*, April, 2018. ([Available at HBR.org](#))

“Position Statement on Challenges Facing Online Video Distributors”, FCC’s Video Landscape Workshop, March, 2016.

“The Dynamic Effects of Triple Play Bundling in Telecommunications”, Time Warner Research Program on Digital Communications, Winter, 2012. ([Available here](#)).

“The Geographical Diffusion of the Internet in the United States”, with Shane Greenstein, in (eds) Munindar Singh, The Practical Handbook of Internet Computing, CRC Press, pp. 56-1 – 56-17, 2004.

#### **TEACHING EXPERIENCE**

Lecturer, 2023 (scheduled).  
Digital Economics for Business.

Lecturer, 2019-2021.  
Predictive Analytics for Business Strategy II. (MBA level)

Lecturer, 2018-2021.  
Predictive Analytics for Business Strategy I. (MBA level)

Lecturer, 2011-2017.  
Predictive Analytics for Business Strategy.

Lecturer, 2016.  
Econometric Methods in Business II (PhD level).

Lecturer, Summer 2012-2014.  
Introduction to Economics (Global Business Institute)

Lecturer, 2011.  
Managerial Economics.

Lecturer, 2010.  
Business Econometrics.

At Cornell:

Lecturer, 2006-2010.  
Empirical Analysis of Industrial Organization (PhD level).

Lecturer, 2005-2010.  
Introduction to Business Regulation.

Lecturer, 2007-2010.  
Game Theory for Applied Economists (PhD level).

Lecturer, Summer 2007.  
Gaming: In the Casino and Beyond (Cornell Adult University).

Guest Lecturer, 2005-2006.  
Graduate Industrial Organization, Empirical methods (PhD level).

At Northwestern:

Teaching Assistant, 2000-2004.  
Introductory Econometrics, Transportation, Intermediate Microeconomics,  
Honors Thesis Seminar, Advanced Econometrics.

Lecturer, 2002-2003.  
Introductory Econometrics, Accelerated Probability and Statistics.

**FELLOWSHIPS AND AWARDS**

Best Research Poster, Research Conference on Communications, Information and  
Internet Policy, 2015.

Trustees Teaching Award, Indiana University, 2015.

Trustees Teaching Award Finalist, Indiana University, 2012, '13, '14, '15.

Certificate of Excellence in Reviewing, Information Economics and Policy, 2014.

Sauvain Teaching Award Nominee, 2014.

Innovative Teaching Award, Kelley School of Business, 2012.

Young Faculty Teaching Excellence Award, Cornell University, 2008.

Outstanding Graduate Student Teacher Award, Northwestern University, 2004.

Distinguished Teaching Assistant Award, Northwestern University, 2001,'02,'03,'04.

University Summer Fellowship, Northwestern University, 2003.

University Fellowship, Northwestern University, 1999-2000.

Teaching Assistant Fellow, Northwestern University.

George W. Thatcher Prize for top student in economics, Miami University, 1998.

Alumni Senior Prize for outstanding student in mathematics and statistics, Miami University, 1998.

Actuarial Exam P (equivalent based on passing pre-2000 Part 1 and Part 2 exams), 1998.

#### **GRANTS AND OTHER FUNDING**

Advanced Analytics for IU's Addictions Grand Challenge

NET Institute Summer Research Grant

Research Data Grant, Kelley School of Business

Time Warner Research Stipend

Cornell's Institute for the Social Sciences Theme Project Faculty Fellow

Cornell Institute for the Social Sciences Small Grant Award

## INVITED PAPER PRESENTATIONS

“Optimal Promises: Application of a General Framework to Airline Schedule Times”

- International Industrial Organization Conference, May, 2022.

“How Much is Privacy Worth Around the World and Across Platforms?”

- University of Kent, October, 2021.
- Kelley Faculty Research Series, IU Mexico Gateway, May, 2021.
- Game Theoretic and Behavioral Economic Insights on Social Media, February, 2021.
- Research Conference on Communications, Information and Internet Policy, February, 2021.
- NBER Economics of IT and Digitization Workshop, July, 2020.
- FTC PrivacyCon, July, 2020.

“The Effect of International Travel on the Spread of Covid-19 in the U.S.”

- Purdue, November, 2020.

“Mobile Internet Usage and Usage Based Pricing”

- Research Conference on Communications, Information and Internet Policy, February, 2021.
- Federal Communications Commission, October, 2020.
- International Industrial Organization Conference, May, 2020.

“A Paradigm for Assessing the Scope and Performance of Predictive Analytics”

- Technology Policy Institute, February, 2018.

“Distinguishing Bandwidth and Latency in Households’ Willingness-to-Pay for Broadband Internet Speed”

- Bureau of Economic Analysis, October, 2017.
- Technology Policy Institute, October, 2017.
- Research Conference on Communications, Information and Internet Policy, September, 2017.

“The Empirical Economics of Online Attention”

- Pomona College, March, 2019.
- Research Conference on Communications, Information and Internet Policy, September, 2017.
- Searle 8<sup>th</sup> Annual Conference on Internet Commerce, June, 2017.
- Federal Communications Commission, March, 2017.
- Media Economics Workshop, October, 2016.
- University of Oklahoma, September, 2016.
- International Industrial Organization Conference, April, 2016.
- American Economic Association Annual Meetings, January, 2016.
- Kellogg School of Management, November, 2015.



- Georgetown University, October, 2015.
- Research Conference on Communications, Information and Internet Policy, September, 2015.

“Does Competition Lead to Agglomeration or Dispersion in EMR Vendor Decisions?”

- International Industrial Organization Conference, April, 2017.

“The Effect of Competition on Toxic Pollution Releases”

- International Industrial Organization Conference, April, 2015.
- University of California, Davis, March, 2015.

“The Impact of Mergers on Quality Provision: Evidence from the Airline Industry”

- Strategic Management Society Conference “Strategies in a World of Networks,” September, 2014.
- International Industrial Organization Conference, April, 2014.

“Measuring Consumer Preferences for Video Content Provision via Cord-Cutting Behavior”

- Cable Show Academic Workshop, April, 2014.
- Research Conference on Communications, Information and Internet Policy, September, 2013.

“Information Technology and Patient Health: Analyzing Outcomes, Populations, and Mechanisms”

- IUPUI, January, 2018
- Purdue University, November, 2014.
- ASHEcon Conference, June, 2014.
- University of Massachusetts, April, 2014.
- International Industrial Organization Conference, April, 2014.
- NBER Economics of IT and Digitization Workshop, July, 2013.

“Indirect Network Effects and the Quality Dimension: A Look at the Gaming Industry”

- Indiana University Economics Department, November, 2013.
- International Industrial Organization Conference, May, 2013.

“Does Service Bundling Reduce Churn?”

- NBER Economics of IT and Digitization Workshop, July, 2012.
- International Industrial Organization Conference, March, 2012.
- Federal Trade Commission, March, 2012.
- Michigan University, November, 2011.
- Research Conference on Communications, Information and Internet Policy, September, 2011.

“The Impact of the Partnership Long-term Care Insurance Program on Private Coverage”  
- University of Cincinnati, October, 2012.

“Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines’ On-Time Performance”  
- Ohio State University, November, 2012.  
- Econometric Society North American Summer Meeting, June, 2011.  
- Temple University, November, 2010.  
- Miami University, October, 2010.  
- International Industrial Organization Conference, May, 2010.

“Has the Internet Accelerated the Diffusion of New Products?”  
- Bureau of Economic Analysis, November, 2009.

“Are Risk Preferences Stable across Contexts? Evidence from Insurance Data”  
- Econometric Society North American Summer Meeting, June, 2008.

“Multi-market Contact and On-Time Performance in the US Airline Industry”  
- International Industrial Organization Conference, May, 2008.

“The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies”  
- ASHEcon Conference, June, 2010.  
- International Industrial Organization Conference, April, 2009.  
- Federal Trade Commission, March, 2008.

“Is Dual Agency in Real Estate a Cause for Concern?”  
- International Industrial Organization Conference, May, 2008.  
- Midwest Economic Association Annual Meeting, March, 2008.

“Internet Adoption Patterns and Usage are Different: Implications for the Digital Divide”  
- University of Maryland, April, 2007.

“How Do Households Choose Quality and Time to Replacement for a Rapidly Improving Durable Good?”  
- Kelley School of Business, February, 2010.  
- Duke University, September, 2007.  
- Cornell University, September, 2007.  
- Econometric Society North American Summer Meeting, June, 2007.  
- International Industrial Organization Conference, April, 2007.

“Relating Inertia and Experience in Technology Markets: An Analysis of Households’ Personal Computer Choices”  
- Dartmouth Winter IO Conference, January, 2006.

“The Beginning of Online/Retail Competition and Its Origins: An Application to Personal Computers”

- International Industrial Organization Conference, April, 2006.
- Cornell University, March, 2006.
- ASSA SGE, January, 2006.

“Repeat Purchase amid Rapid Quality Improvement: Structural Estimation of the Demand for Personal Computers”

- Penn State University, April, 2007.
- Econometric Society World Conference, August, 2005.
- International Industrial Organization Conference, April, 2005.
- Miami University, March, 2005.
- ASSA SGE, January, 2005.
- Duke University, November, 2004.
- Cornell University, November, 2004.
- NBER Summer Institute, July, 2004.

## **EXPERT PANELS AND ENGAGEMENTS**

Advertising Markets: Is the Current Ecosystem Stimulating Competition? Concurrences’ Global Antitrust Economics Conference, November, 2021.

Damages from Data Breach and Misuse of Personal Information, Brattle Group, October, 2021.

Broadband Mapping Roundtable, Technology Policy Institute, October, 2021.

Panel on Competition and Innovation, 14<sup>th</sup> Annual Innovation Economics Conference, August, 2021.

Privacy, Please? American Bar Association Panel on Valuing Privacy, April, 2021.

Two Think Minimum Podcast with Scott Wallsten and Sarah Oh, Technology Policy Institute, February, 2021. ([Podcast link](#))

Panel on the Economy of Spectrum Sharing and Business Development, NSF Virtual Workshop on New Paradigms in Intelligent Spectrum Management and Regulations, December, 2020.

Scientific Sense Podcast Interview with Gill Eapen, October, 2020. ([Podcast link](#))

Panel on the Attention Economy, Technology Policy Institute Aspen Forum, October, 2020. ([Online video](#))

Panel on Antitrust Policy and Intellectual Property (moderator), Northwestern/USPTO Conference on Innovation Economics, August, 2020.

Panel on STELAR/Retransmission Consent, Phoenix Center Telecom Symposium, December, 2019.

BU Technology Policy Research Initiative Conference on the Law and Economics of IP, July, 2019.

FTC Merger Retrospective Hearing, Federal Trade Commission, April, 2019 ([Online video](#)).

Panel on Consumer Protection and Regulation, Maurer School of Law, March, 2018.

Terminator or the Jetsons? The Economics and Policy Implications of Artificial Intelligence, Technology Policy Institute, February, 2018.

All Data is Health Data; The Impact of Data and Data Laws on Clinical Care, Innovation, and Research, Symposium at Hall Center for Law and Health, October, 2017.

Tools of Damages Estimation, IPO's Damages and Injunctions Committee Conference, June, 2017.

The Unlikely Pairing of Payers, Providers and Pharma for Patient Centered Analytics, Kelley Forum on Healthcare Analytics, September, 2016.

Challenges Faced by Online Video Distributors, Federal Communications Commission Video Landscape Workshop, March, 2016 ([Online video](#)).

The Future of Video Policy and Business Models, hosted by the Technology Policy Institute, January, 2014 ([Online audio](#)).

## **PUBLIC SPEECHES**

“State of the Economy”

- Mechanical Contractor Association of Indiana Annual Meeting, June, 2022.

“IoT and Telecom Policy”

- Nelms Distinguished E-Seminar Series, University of Florida, October, 2020.

“Delivering Econometrics Skills within a Business Analytics Curriculum”

- Robert Morris Teaching Economics Conference, February, 2018

“Critical Assessment of Correlation vs. Causality for Business Decisions”

- 180 Degrees Consulting, Indiana University, February, 2017

“Bringing Repeated Games to Life via Empirical Examples”

- McGraw-Hill Education Fall INXPO Event, October, 2016
- University of Phoenix School of Business Symposium, March, 2016
- McGraw-Hill Education Teaching Workshop for Professional Development, March, 2013

“Critical Assessment of Correlation vs. Causality for Public Policy”

- Vietnam Initiative with Indiana University, October, 2015

“As Graduates of Elder, You are Ready...”

- Cincinnati Elder High School Graduation Commencement, May, 2005

## **PUBLIC COMMENTARY**

“Comment on the January 2022 DOJ and FTC RFI on Merger Enforcement: Issues Related to Digital Markets,” public submission to antitrust agencies, March, 2022. ([Available at SSRN](#))

“People Lie When Answering Polls. Here’s How to Fix It”, with Scott Wallsten, *Technology Policy Institute Blog*, January, 2021. ([Available at TPI](#))

“Travelers Coming from Italy May Have Driven First US Covid-19 Wave More Than Those From China, Study Suggests”, with Daniel Simon, *The Conversation*, January, 2021. ([Available at the Conversation](#))

“Improved Economic Analysis Should Be Lasting Part of Pai’s FCC Legacy”, with Babette Boliek and Jerry Ellig, *The Hill*, December, 2020. ([Available at The Hill](#))

## **MEDIA COVERAGE**

Specific Papers/Books/Public Commentary:

“Travelers Coming from Italy May Have Driven First US Covid-19 Wave More Than Those From China, Study Suggests”

- Reprint in Associated Press, Yahoo News

“How Much is Privacy Worth Around the World and Across Platforms?”

- “Facebook Would have to pay \$3.50 Per Month to U.S. Users for Sharing Contact Info: Study” by Nandita Bose, *Reuters*, February 25, 2020. Reprint in *NY Times*. ([Online version](#))

“A Paradigm for Assessing the Scope and Performance of Predictive Analytics”

- “A Paradigm for Assessing the Scope and Performance of Predictive Analytics – Economic and Policy Implications of AI,” by Wallis G. Romzek, Technology Policy Institute, April 17, 2018. ([Online version](#)).

“Does Original Content Help Streaming Services Attract More Subscribers?”

- “Will Netflix Win the Streaming Wars?”, Louis Foglia, BEME News, August, 2019. ([Video](#)).
- “Streaming Video: Original Content is the Hook,” by David Marino-Nachison, Barron’s Next, April 25, 2018. ([Online version](#)).

Predictive Analytics for Business Strategy

- “Kelley Professor’s New Book ‘Actively’ Advocates the Role of Economics within Today’s Analytics Boom,” by George Vlahakis, Kelley School official blog, March 27, 2018. ([Online version](#)).

“The Impact of Mergers on Quality Provision: Evidence from the Airline Industry”

- “Flight Delay? Lost Luggage? Don’t Blame Airline Mergers, Research Shows,” by George Vlahakis, reprinted in *Science Daily*, May 23, 2017. ([Online version](#)).

“The Empirical Economics of Online Attention”

- “We Spend a Fixed Amount of Time Online Each Week (But People with Higher Incomes Spend Less),” by Julia Hann, *Forbes*, September 14, 2016. ([Online version](#)).
- “Let Them Eat Internet,” by Tyler Cohen, *Marginal Revolution*, July 19, 2016. ([Online version](#)).
- “Consumers Have a Troubling Internet Habit That’s Threatening Digital Media,” by Myles Udland, *Business Insider*, July 19, 2016. ([Online version](#)).
- “Richer People Spend Less Time on the Internet,” by Allee Manning, *Vocativ*, July 19, 2016. ([Online version](#)).

“The Impact of the Partnership Long-term Care Insurance Program on Private Coverage”

- “The Boomer Challenge: It’s a Numbers Game,” by Paul Barr, *Hospitals and Health Networks*, April 8, 2014. ([Online version](#)).

“Do Incumbents Improve Service Quality in Response to Entry: Evidence from Airlines’ On-Time Performance”

- “Study Finds That Competition May Lead to More Airline Delays,” by Hugo Martin, *LA Times*, December 22, 2013. ([Online version](#)).

“Racial Bias in Expert Quality Assessment: A Study of Newspaper Movie Reviews”

- “Psychology Uncovers Racism at the Movies,” by Dr. Raj Persaud and Adrian Furnham, *Psychology Today*, September 5, 2015. ([Online version](#))
- “Men in Black the movie – but men in white would be a better film?,” by Dr. Raj Persaud and Adrian Furnham, *Huffington Post*, May 22, 2012. ([Online version](#)).

“The Welfare Impact of Reducing Choice in Medicare Part D: A Comparison of Two Regulation Strategies”

- “Medicare As We’ve Known It Isn’t an Option,” by Betsy McCaughey, *Wall Street Journal*, April 27, 2011. ([Online content](#)).

“Internet Adoption Patterns and Usage are Different: Implications for the Digital Divide”

- “People below ‘digital divide’ would use the Internet more, if they had it,” by Bill Steele, *Cornell Chronicle*, April 18, 2008. ([Online version](#)).
- Invited guest for “Digital Divide,” *Nevada Public Radio*. ([Online content](#)).

Expert Opinion:

“ISP/Website ‘Mutuality of Interests’ – or Retrans Blackouts – Among Net Neutrality Reversal Possibilities,” *Communications Daily*, Vol. 34, No. 17, January, 2014.

**PROFESSIONAL SERVICE**

NBER Small Digitization Grants Review Committee, 2022.

Research Conference on Communications, Information and Internet Policy (TPRC) Program Committee, 2017-2021.

International Industrial Organization Conference (IIOC) Local Organizer, 2018.

Midwest Health Economics Conference Local Organizing Committee, 2016.

European Conference on Information Systems (ECIS) Associate Editor of the track “Decision Analytics, Big Data, and Visualization,” 2016.

International Conference on Information Systems (ICIS) Associate Editor of the track “Decision Analytics, Big Data, and Visualization,” 2014.

International Industrial Organization Conference (IIOC) Program Committee, 2012-2014.



Ad hoc referee for:

*Agricultural and Resource Economics Review, American Economic Journal: Applied Economics, American Economic Review, Applied Economics, Applied Financial Economics, B.E. Journal of Economic Analysis & Policy, Communications of the Association for Information Systems, Economic Inquiry, Economics of Education Review, Economics of Innovation and New Technology, Economics Letters, European Journal of Law and Economics, Geneva Papers on Risk and Insurance, Growth and Change: A Journal of Urban and Regional Policy, Health Economics, Health Services Research, Information Economics and Policy, International Economic Review, International Journal of Industrial Organization, Israel Science Foundation, Journal of Air Transport Management, Journal of Banking and Finance, Journal of Competition Law and Economics, Journal of Economics and Business, Journal of Economics and Management Strategy, Journal of the European Economic Association, Journal of Gerontology, Journal of Health Economics, Journal of Industrial Economics, Journal of Policy Analysis and Management, Journal of Political Economics, Journal of Public Economics, Journal of Risk and Insurance, Journal of Rural Studies, Journal of Urban Technology, Leverhulme Trust, Management Science, Marketing Science, National Science Foundation, Organizational Science, Oxford Bulletin of Economics and Statistics, Quantitative Marketing and Economics, Quarterly Journal of Economics, Quarterly Review of Economics and Finance, RAND Corporation, RAND Journal of Economics, Research Policy, Review of Economics and Statistics, Review of Industrial Organization, Review of Network Economics, Risk Management and Insurance Review, Social Behavior and Personality, Southern Economic Journal, Strategic Management Journal, Telecommunications Policy, Telematics and Informatics, Transportation Research Part E, U.S.-Israel Binational Science Foundation, World Development*

External tenure/promotion/reappointment reviewer for:

Drexel University, Emory University, Fairfield University, Georgetown University, Loyola University Maryland, Purdue University, Stanford University, University of Colorado, University of Georgia, University of Massachusetts, University of Oklahoma

External program reviewer for:

Ball State University Economics

## **DISCUSSANT ACTIVITIES**

International Industrial Organization Conference, May, 2022

- “Conflicts of Interest, Ethical Standards, and Competition in Legal Services,” by Jan Bouckaert and Johan Stennek

NBER Economics of Digitization Summer Institute Meeting, July, 2021

- “Browsers Don’t Lie? Gender Differences in the Effects of Covid-19 Lockdowns on Digital Activity and Time Use,” by Amalia R. Miller, Kamalini Ramdas, and Alp Sungu

- “Does Telemedicine Transcend Disparities or Create a Digital Divide? Evidence from the Covid-19 Pandemic,” by Jeffrey McCullough, Kartik K. Ganju, and Chandy Ellimoottil

NBER Economics of Digitization Summer Institute Meeting, July, 2018

- “Steering Incentives and Bundling Practices in the Telecommunications Industry,” by Brian McManus, Aviv Nevo, Zachary Nolan, and Jonathan W. Williams

International Industrial Organization Conference, April, 2017

- “Price-Linked Subsidies and Health Insurance Markups,” by Sonia Jaffe and Mark Shepard

NBER Economics of Digitization Meeting, March, 2017

- “Using Massive Online Choice Experiments to Measure Changes in Well-being,” by Erik Brynjolfsson, Felix Eggers, and Avinash Gannamaneni

International Industrial Organization Conference, April, 2016

- “Using Matching to Study Merger: An Application to the U.S. Airline Industry,” by Zexuan Liu, Pallab Ghosh, and Qihong Liu
- “Market Structure with the Entry of Peer-to-Peer Platforms: The Case of Hotels and Airbnb,” by Chiara Farronato and Andrey Fradkin

Searle Center Conference on Innovation Economics, June, 2015

- “How Do Open Standards Influence Inventive Activity? Evidence from the IETF,” by Wen Wen, Chris Forman, and Sirkka Jarvenpaa

Searle Center Conference on Internet Search and Innovation, June, 2015

- “Match Quality, Search, and the Internet Market for Used Books,” by Sara Fisher Ellison
- “E-Book Pricing and Vertical Restraints,” by Babur De los Santos and Matthijs Wildenbeest

International Industrial Organization Conference, April, 2015

- “Do Private Medicare Firms Face Lower Costs?,” by Keaton Miller
- “The Market for Electric Vehicles: Indirect Network Effects and Policy Impacts,” by Yiyi Zhou

Searle Center Research Roundtable on Patents and Technology Standards: The Data Sets, April, 2015

American Economic Association Annual Meetings, Pricing and Resource Allocation in Telecommunications, January, 2015

- “Employing Auctions to Allocate Scarce Resources,” by John Mayo and David Sappington

American Economic Association Annual Meetings, Digital Media Economics, January, 2015

- “Super Returns? The Effects of Ads on Product Demand,” by Seth Stephens-Davidowitz, Hal Varian, and Michael D. Smith

Searle Center Conference on Internet Search and Innovation, June, 2014

- “Auction vs. Posted-Price: Market Mechanism, Lender Behaviors, and Transaction Outcomes in Online Crowdfunding,” by Zaiyan Wei and Mingfeng Lin

Research Roundtable on the Law and Economics of Digital Markets, July, 2013

- “Digital Music Consumption on the Internet,” by Bertin Martens and Luis Aguiar

Searle Center Conference on Internet Search and Innovation, June, 2013

- “When Does Retargeting Work? Information Specificity in Online Advertising,” by Anja Lambrecht and Catherine Tucker
- “Local News Online: Aggregators, Geo-Targeting and the Market for Local News,” by Lisa George

International Industrial Organization Conference, May, 2013

- “The Impact of Privacy Policy on the Auction Market for Online Display Advertising,” by Garrett Johnson
- “Transactions in Two-Sided Markets,” by Alexei Alexandrov and Daniel Spulber

American Economic Association Annual Meetings, Economics of the Internet, January, 2013

- “Supply-Side Responses to Privacy Protection,” by Avi Goldfarb and Catherine Tucker

Searle Center Book Preview Roundtable, December, 2012

- *Innovation from the Edges: The Economics of Creating the Commercial Internet*, by Shane Greenstein

Searle Center Conference on Internet Search and Innovation, June, 2012

- “News Aggregators and Competition among Newspapers,” by Doh-Shin Jeon and Nikrooz Nasr Esfahani

- “Technology Shocks in Multi-Sided Markets: The Impact of Craigslist on Local Newspapers,” by Robert Seamans and Feng Zhu

Midwest Health Economics Conference, May, 2012

- “The Anticipatory Effects of Medicare Part D on Drug Utilization,” by Abby Alpert

International Industrial Organization Conference, March, 2012

- “Intra-Household Effects on Demand for Telephone Service: Empirical Evidence,” by Ching-I Huang
- “Unobserved Risk Type and Sorting: Signaling Game in Online Credit Markets,” by Kei Kawai, Ken Onishi, and Kosuke Uetake

NBER Economics of Digitization Meeting, February, 2012

- “The Effect of Localization in News Aggregators on Local News Consumption,” by Susan Athey and Markus Mobius

Federal Trade Commission Microeconomics Conference, November, 2011

- “Do Firms Game Quality Ratings? Evidence from Mandatory Disclosure of Airline On-Time Performance,” by Silke Forbes, Mara Lederman, and Trevor Tombe

International Industrial Organization Conference, May, 2010

- “Competition in Public School Districts: Student Sorting, School Quality Determination, and School Entry,” by Nirav Mehta
- “A Model of Entry and Network Access Competition in Local Telephony,” by Gustavo Marcos and Eduardo Saavedra

International Industrial Organization Conference, April, 2009

- “Consumer Search and Online Demand for Durable Goods,” by Jun Kim, Bart Bronnenberg, and Paulo Albuquerque
- “Price Controls and Competition in Gasoline Retail Markets,” by Juan Esteban Carranza and J.F. Houde

International Industrial Organization Conference, May, 2008

- “A Simple Model of Pricing for Non-storable Goods in Oligopoly: Some Considerations on Airline Pricing Behaviour,” by Marco Alderighi

International Industrial Organization Conference, April, 2007

- “Markov Perfect Industry Dynamics with Many Firms,” by Gabriel Weintraub

International Industrial Organization Conference, April, 2006

- “Price, Price Dispersion and Number of Sellers at a Low Entry Cost Shopbot,” by Michelle Haynes and Steve Thompson

International Industrial Organization Conference, April, 2005

- “Asymmetric Advertising Costs as a Barrier to Entry: Evidence from Theatrical Motion Pictures,” by Charles Moul

## **BOOK REVIEWS**

Bekes, G. and Kezdi, G., *Patterns, Causality and Prediction: Data Analysis for Business, Economics and Policy*, Cambridge University Press, 2017.

Lesser, W., *American Business Regulation: Understand, Survive, and Thrive*, M.E. Sharpe, 2015.

## **CONSULTING AND EXPERT WITNESS WORK**

Expert reports, deposition, testimony and consulting for various matters including:

- Competition policy and antitrust
- Consumer protection
- Damages calculations
- Intellectual property
- Privacy valuation
- Survey design and analysis
- Telecommunications policy

## **MEMBERSHIPS**

American Economic Association.

Industrial Organization Society.

Academy of Management.

Association for Information Systems.

Team member for Cornell’s Institute for the Social Sciences Theme Project, Getting Connected: Social Science in the Age of Networks, 2005-2008.

## **UNIVERSITY SERVICE**

Member of Indiana Business Research Center Executive Director Search Committee, 2021-2022.

Member of Diversity, Equity & Inclusion Task Force, 2020-2021.

Member of Hiring Committee for Business Economics and Public Policy, 2017-2018, 2015-2016 & 2010-2011.

Chair of Hiring Committee for Business Economics and Public Policy, 2014-2015 & 2013-2014.

Kelley Direct Policy Committee, 2014-2016.

Judge for Kelley Honors Case Competition, 2016.

Judge for Deloitte Undergraduate Case Competition, 2017, 2015, 2011.

Co-founder and Judge for Economic Consulting Case Competition (EC3), sponsored by the Keystone Group, 2011-2015.

Co-founder and Co-organizer for BEPP “Eat, Meet, & Compete,” 2012-2015.

Undergraduate Policy Committee, 2012-2014 & 2010-2011.

Doctoral Advisor for Business Economics and Public Policy, 2011-2012.

Doctoral Policy Committee, 2011-2012.

Judge for Net Impact Sustainable Business Club 2010 Case Competition, 2010.

*At Cornell:*

Applied Economics and Management Petitions Committee, 2007-2010.

Policy Analysis and Management External Hiring Committee, 2006-2007 & 2009-2010.

Mann Café Advisory Board, 2007-2010.

Institute for the Social Sciences Small Grant Program Committee, 2008.

Biz Quiz Faculty Advisor, 2008.

Applied Economics and Management Seminar Committee, 2005-2007.

Judge for Globalize '07, Cornell Hotel School, 2007.

Mann Library Vendor Evaluation Sub-committee, 2006.

## **PHD STUDENTS**

### *Committee Chair:*

Hong Lee  
Aparna Soni  
Yu-Hsin Liu  
Yejing Ren  
Junlin Du (Co-chair)  
Fernanda Lopez de Leon

### *Committee Member:*

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Catalin Stefanescu  
Susan Kayser  
Eric Schmidbauer  
Shyam Venkatesan  
Carlos Castelan  
Joo Yeon Sun  
Annemie Maertens (Substitute member)  
Thanasin Tanompongphandh  
Jiahong Zhang  
Lona Fowdur  
Anirban Mukherjee  
Marc Bellemare (Substitute member)  
Hyunkyung Choe  
Daniel Shawhan

### *External Proposal Reviewer:*

Andres Jola Sanchez (chair)  
Mohammad Ghuloum  
Kyle Bradley

## **MASTERS STUDENTS**

### *Committee Member:*

Malcolm Wade (Johns Hopkins, Systems Engineering)



## **Appendix B**

### **List of Expert Witness Work During the Previous Four Years**

#### **JEFFREY T. PRINCE**

##### **Testimony (2)**

Qualcomm Incorporated v. Apple Incorporated (Case No. 3:17-cv-1375), United States District Court for the Southern District of California, March 7 & 8, 2019

Apple Inc. v. Wi-LAN Inc. (Case No. 14cv2235-DMS w/ 14cv1507-DMS), United States District Court for the Southern District of California, July 25 & 26, 2018

##### **Tutorial-styled Hearing (“Hot Tub”) (1)**

Dennis McGrath et al. v. Marriott International, Inc. et al. (Case No. 8:19-cv-00368-PWG), United States District Court of Maryland Southern Division, March 21, 2022

##### **Deposition (8)**

Dennis McGrath et al. v. Marriott International, Inc. et al. (Case No. 8:19-cv-00368-PWG), United States District Court of Maryland Southern Division, December 23, 2021

Theta IP, LLC v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (Case No. 6:20-cv-00160-ADA), United States District Court for the Western District of Texas Waco Division, October 28, 2021

Apple iPhone Antitrust Litigation (Case No. 4:11-cv-06714-YGR), United States District Court for the Northern District of California Oakland Division, October 4, 2021

Dennis McGrath et al. v. Marriott International, Inc. et al. (Case No. 8:19-cv-00368-PWG), United States District Court of Maryland Southern Division, August 13, 2021

Wi-LAN Inc. v. Apple Inc. (Case No. 3:14-cv-02235-DMA-BLM), United States District Court for the Southern District of California, June 11, 2019

Qualcomm Inc. v. Apple Inc. (Case No. 3:17-cv-1375), United States District Court for the Southern District of California, November 7, 2018

Apple Inc. v. Qualcomm Inc. (Case No. 17cv0108 GPC NLS), United States District Court for the Southern District of California, October 19, 2018

Apple Inc. v. Wi-LAN Inc. (Case No. 14cv2235-DMS w/ 14cv1507-DMS),  
United States District Court for the Southern District of California, April 5, 2018

Expert Report (8)

Dennis McGrath et al. v. Marriott International, Inc. et al. (Case No. 8:19-cv-00368-PWG), United States District Court of Maryland Southern Division  
(rebuttal)

Theta IP, LLC v. Samsung Electronics Co., Ltd. and Samsung Electronics  
America, Inc. (Case No. 6:20-cv-00160-ADA), United States District Court for  
the Western District of Texas Waco Division

Apple iPhone Antitrust Litigation (Case No. 4:11-cv-06714-YGR), United States  
District Court for the Northern District of California Oakland Division

Dennis McGrath et al. v. Marriott International, Inc. et al. (Case No. 8:19-cv-00368-PWG), United States District Court of Maryland Southern Division

Wi-LAN Inc. v. Apple Inc. (Case No. 3:14-cv-02235-DMA-BLM), United States  
District Court for the Southern District of California, April 19, 2019

Qualcomm Inc. v. Apple Inc. (Case No. 3:17-cv-1375), United States District  
Court for the Southern District of California, September 18, 2018

Apple Inc. v. Qualcomm Inc. (Case No. 17cv0108 GPC NLS), United States  
District Court for the Southern District of California, June 29, 2018

Apple Inc. v. Wi-LAN Inc. (Case No. 14cv2235-DMS w/ 14cv1507-DMS),  
United States District Court for the Southern District of California, February 15,  
2018

## Appendix C

### Documents Considered

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#### *Case Documents*

- Declaration of Brenton Cheng dated February 14, 2022.
- Defendant Internet Archive's Answer and Affirmative Defenses to the Complaint dated July 28, 2020.
- Defendant Internet Archive's Objections and Responses to Plaintiffs' Second Set of Interrogatories.
- *Hachette Book Group, Inc., et al., v. Internet Archive*, United States District Court, Southern District of New York, Case No. 1:20-cv-04160-JGK-OTW, Complaint for Copyright Infringement dated June 1, 2020.

#### *Depositions*

- Deposition Testimony of Adam Silverman taken December 6, 2021.
- Deposition Testimony of Alan Pavese taken December 10, 2021.
- Deposition Testimony of Alison Lazarus taken November 12, 2021.
- Deposition Testimony of Andrea Rogina Mills taken October 14, 2021.
- Deposition Testimony of Ben Sevier taken November 4, 2021.
- Deposition Testimony of Brenton Cheng taken December 3, 2021.
- Deposition Testimony of Brewster Kahle taken December 9, 2021.
- Deposition Testimony of Chantal Restivo-Alessi taken December 1, 2021.
- Deposition Testimony of Chris Freeland taken December 17, 2021.
- Deposition Testimony of Jeff Weber taken November 19, 2021.
- Deposition Testimony of Josh Marwell taken December 3, 2021.
- Deposition Testimony of Michael Gaudet taken November 8, 2021.
- Deposition Testimony of Michael Karpeles taken October 27, 2021.
- Deposition Testimony of Skip Dye taken November 18, 2021.
- Deposition Testimony of Steve Potash taken January 31, 2022.

#### *Expert Reports*

- Expert Report of Ian Foster dated February 25, 2022.
- Expert Report of Imke Reimers dated February 25, 2022.
- Expert Report of Rasmus Jorgensen dated February 25, 2022.
- Expert Report of Susan Hildreth dated February 25, 2022.
- Supplemental Expert Report of Ian Foster dated March 31, 2022.

#### *Bates Stamped Documents*

- AAP000644.
- AAP000664.
- AAP000684.
- AAP000704.
- AAP000724.
- AAP000905.
- AAP000925.
- AAP000945.
- AAP000965.
- AAP000985.
- AAP001005.
- BWB\_000424.
- BWB\_000426.
- HACHETTE0002327.

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- HACHETTE0002473.
- HACHETTE0002474.
- HACHETTE0002475.
- HACHETTE0002574.
- HACHETTE0002576.
- HACHETTE0003138.
- HACHETTE0008570.
- HACHETTE0010909.
- HACHETTE0010980
- HACHETTE0012376.
- HACHETTE0012377.
- HC0003508.
- HC0003510.
- HC0010272.
- HC0011420.
- HC0011426.
- HC0012891.
- HC0017900.
- HC0030132.
- HC0036462.
- HC0036463.
- HC0036464.
- INTARC 00354190.
- INTARC00137512.
- INTARC00138760.
- INTARC00140956.
- INTARC00141495.
- INTARC00141514.
- INTARC00142017.
- INTARC00142659.
- INTARC00142801.
- INTARC00151083.
- INTARC00151363.
- INTARC00151738.
- INTARC00151754.
- INTARC00152104.
- INTARC00152126.
- INTARC00169341.
- INTARC00333600.
- INTARC00354190.
- INTARC00374675.
- INTARC00376651.
- INTARC00394741.
- INTARC00395793.
- INTARC00397105.
- INTARC00439228.
- PLAINTIFFS00000632.
- PLAINTIFFS00000857.
- PLAINTIFFS00000989.
- PLAINTIFFS0001005.
- PLAINTIFFS0001010.

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- PRH0006999.
- PRH0007002.
- PRH0025907.
- PRH0027763.
- PRH0053413.
- PRH0058941.
- PRH0068115.
- PRH0068803.
- PRH0072194.
- PRH0072244.
- PRH0072389.
- WILEY0005650.
- WILEY0011641.
- WILEY0011657.
- WILEY0011680.
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- WILEY0011699.
- WILEY0011723.

#### *Third Party Data*

- Spreadsheet produced by OverDrive, "1 & 2 - CONFIDENTIAL - Checkout Data.xlsx."
- Spreadsheet produced by OverDrive, "OverDrive\_Supp\_002."

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- Baye, Michael and Jeff Prince, *Managerial Economics and Business Strategy*, 10th ed. (2020), Berkshire: McGraw-Hill Education.
- Besanko, D., Dranove, D., Shanley, M. and Schaefer, S., *Economics of Strategy*, 7th ed. (2016), John Wiley & Sons.
- Danaher, Brett and Smith, Michael D. and Telang, Rahul, "Piracy Landscape Study: Analysis of Existing and Emerging Research Relevant to Intellectual Property Rights (IPR) Enforcement of Commercial-Scale Piracy," USPTO Economic Working Paper No. 2020-02 (April 2020).
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- Hui Li, "Are E-Books a Different Channel? Multichannel Management. Quantitative Marketing and Economics," (January 2021).
- Lee, Kyunghye and Han, Kunsoo and Lee, Byungtae, "Heterogeneous Effects of Ebook Distribution on Print Sales: The Role of Distribution Strategies and Book Characteristics," SSRN Working Paper (March 23, 2020).
- Liebowitz, Stan J., *The impacts of internet piracy*, Chapters, in: Richard Watt (ed.), *Handbook on the Economics of Copyright*, chapter 13, pages 225-240, Edward Elgar Publishing (2014).
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- Nicholson, W., and Snyder, C., 11th edition, *Microeconomic theory: Basic principles and extensions*, (2008), Mason, Ohio: Thomson/South-Western.
- Novos, Ian E. and Michael Waldman, "The Effects of Increased Copyright Protection: An Analytic Approach," *Journal of Political Economy*, April 1984, Vol. 92, No. 2 (April, 1984).
- Rao, Akshay R., and Kent B. Monroe, "The Effect of Price, Brand Name, and Store Name on Buyers' Perceptions of Product Quality: An Integrative Review," *Journal of Marketing Research*, Vol. 26, No. 3, 351-357 (August, 1989).

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- Sharma, Siddhartha and Telang, Rahul and Zentner, Alejandro, “The Impact of Digitization on Print Book Sales: Analysis using Genre Exposure Heterogeneity,” SSRN Working Paper, (November 25, 2019).
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- Yoon, K., “The optimal level of copyright protection,” *Information Economics and Policy*, Vol. 14, 327–348, (2001).
- Zentner, Alejandro, “Measuring the Effect of File Sharing on Music Purchases,” *Journal of Law and Economics*, Vol. 49, No. 1, 63-90 (April, 2006).

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- Alexandra Alter, “For Bookstore Owners, Reopening Holds Promise and Peril,” May 12, 2020. (<https://www.nytimes.com/2020/05/12/books/bookstores-reopening-coronavirus.html>.)
- Alexandra Alter, “Printer Jam: Serious Supply Issues Disrupt the Book Industry’s Fall Season,” August 27, 2020. (<https://www.nytimes.com/2020/08/27/books/printing-companies-backlog-book-publishing.html?msclkid=3a0f9df8c75811ec8c3e1f4748c1efec>.)
- Alexandra Alter, “With Kids Learning From Home, Children’s Publishers a Spike,” March 24, 2020. (<https://www.nytimes.com/2020/03/24/books/home-schooling-workbooks-sales-increase-virus.html>.)
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- Amazon, “Amazon Best Sellers.” (<https://www.amazon.com/Best-Sellers-Books-on-CD/zgbs/books/69724>, viewed on April 28, 2022.)
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- Andrew Albanese, “PRH Extends Temporary E-book, Digital Audio Terms for Libraries,” April 8, 2021. (<https://www.publishersweekly.com/pw/by-topic/industry-news/libraries/article/86023-prh-extends-temporary-e-book-digital-audio-terms-for-libraries.html>.)
- *Association of American Publishers, Inc., v. Brian E. Frosh*, United States District Court for the District of Maryland, Case No. DLB-21-3133, Memorandum Opinion
- Audible, “Audiobooks are just the beginning.” ([https://www.audible.com/ep/audiobooks?ref=a\\_hp\\_t1\\_navTop\\_pl0cg0c0r0&pf\\_rd\\_p=5c0d7aaa-254f-4b79-8208-be137ad379e4&pf\\_rd\\_r=JNV2QZN3BRG1Z2R5S01X](https://www.audible.com/ep/audiobooks?ref=a_hp_t1_navTop_pl0cg0c0r0&pf_rd_p=5c0d7aaa-254f-4b79-8208-be137ad379e4&pf_rd_r=JNV2QZN3BRG1Z2R5S01X), viewed on April 28, 2022.)
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- Denver Public Library, “Online Resources for Reading at Home With Kids in Kindergarten-2nd Grade.” (<https://kids.denverlibrary.org/activities/k-3/online-resources-reading-home-kids-kindergarten-2nd-grade>, viewed on April 28, 2022.)
- Elizabeth A. Harris, “‘The Beginning of the Snowball’: Supply-Chain Snarls Delay Books,” October 4, 2021. (<https://www.nytimes.com/2021/10/04/books/book-publishing-supply-chain-delays.html>.)
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- Wiley, “Corporate Information.” (<https://www.wiley.com/WileyCDA/Section/id-301454.html>, viewed on April 29, 2022.)

## Appendix D

### Evolution of Plaintiff Publishers' pricing strategies in the library ebook market

#### *HarperCollins:*

- Prior to 2011, HarperCollins offered a One-Copy/One-User Model with a perpetual term.<sup>1</sup>
- In 2011, HarperCollins switched to a One-Copy/One-User Model with a total of 26 circulations ("26-Circ Model"), for all of its ebook titles.<sup>2</sup> Under the 26-Circ Model, in exchange for one payment, libraries receive a license to circulate a particular title 26 times on a one-copy/one-user basis. The title remains available for patrons to check out until all of the 26 circulations have been exhausted.
- At the start of fiscal year 2018, HarperCollins implemented a test program to license ebooks for select academic titles on a perpetual basis.<sup>3</sup>
- In late 2018, HarperCollins introduced a Pay-Per-Use Model ("PPU Model"). Under this model, libraries may show HarperCollins' entire catalog to their patrons and libraries pay a fee for a single, individual use and only when a particular title is checked out by a patron.<sup>4</sup>

#### *Penguin Random House:*

- Prior to mid-2013 merger of Penguin Group USA and Random House (which formed Penguin Random House), Penguin Group USA offered a model where public libraries could purchase a license to make a title available for lending to patrons for an unlimited number of checkouts for a one-year period and Random House offered a One-Copy/One-User Model with a perpetual term.<sup>5</sup>

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<sup>1</sup> HC0011420.

<sup>2</sup> See 3rd Amended Schedule F: Digital Terms of Sale (Institutional Accounts), Terms of Distribution E-Books and Downloadable Audiobooks from HarperCollins (HC0011420).

<sup>3</sup> See Higher Ed. Library Channel In-Perpetuity eBook Model Test August 2, 2018 (HC0012891).

<sup>4</sup> All HarperCollins titles qualify for the PPU Model eighteen months after the initial publication date, although libraries may choose to still pay for these backlist titles under the One-Title/One-User Model as well. To afford libraries more options in light of the start of the COVID-19 pandemic, HarperCollins announced that it would add 800 frontlist eBook titles to the PPU Model. See OverDrive, "Import Updates from HarperCollins." (<https://company.overdrive.com/2020/03/25/important-updates-from-harpercollins/>, viewed on April 28, 2022.)

<sup>5</sup> Publishers Weekly, "Penguin Random House Unifies E-Book Terms for Libraries." (<https://www.publishersweekly.com/pw/by-topic/digital/content-and-e-books/article/68838-penguin-random-house-unifies-e-book-terms-for-libraries.html#:~:text=Going%20forward%2C%20all%20Penguin%20Random,newly%20set%20maximum%20of%20%2465>, viewed on April 28, 2022).

- In late 2015, Penguin Random House announced that it would adopt a One-Copy/One-User Model with a perpetual term, starting on January 1, 2016.<sup>6</sup>
- In late 2018, Penguin Random House switched to a new One-Copy/One-User Model with a metered, two-year term (“Two-Year Model”), replacing the perpetual model.<sup>7</sup> Under the Two-Year Model, public libraries could purchase a license to make a title available for lending to its patrons for an unlimited number of checkouts over a two-year period. Penguin Random House continued to license ebooks to academic libraries on an in-perpetuity basis.
- At the start of the pandemic in mid-March 2020, Penguin Random House adopted a temporary PPU Model for all titles, and extended this model through June 2022.<sup>8</sup>
- In 2021, in light of the pandemic,<sup>9</sup> Penguin Random House adopted a temporary, supplemental One-Copy/One-User Model with a metered, one-year term.<sup>10</sup>

*Hachette:*

- Prior to mid-2019, Hachette utilized a One-Copy/One-User Model with a perpetual term.
- In 2019, Hachette switched to a new One-Copy/One-User Model with a two-year term (“Two-Year Model”).<sup>11</sup> Under the Two-Year Model, public libraries could purchase a license to make a title available for lending to patrons for an unlimited number of checkouts for a two-year period.
- In 2020, Hachette created a separate One-Copy/One-User Model with a perpetual term to license ebooks to academic libraries.<sup>12</sup>

*Wiley:*

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<sup>6</sup> PRH0053413 (announcing new “eBook and Digital Audio Terms of Sale for U.S. and International Public Library and School Library Wholesalers” to be effective starting January 1, 2016).

<sup>7</sup> PRH0007002 - 004, at 002.

<sup>8</sup> PRH0068803 - 804, at 804.

<sup>9</sup> Andrew Albanese, “Is the Covid-19 Crisis a Watershed Moment for Library E-books.” (<https://www.publishersweekly.com/pw/by-topic/industry-news/libraries/article/82834-is-the-covid-19-crisis-a-watershed-moment-for-library-e-books.html>, viewed on April 28, 2022.). *See also*, Andrew Albanese, “PRH Extends Temporary E-book, Digital Audio Terms for Libraries.” (<https://www.publishersweekly.com/pw/by-topic/industry-news/libraries/article/86023-prh-extends-temporary-e-book-digital-audio-terms-for-libraries.html>, viewed on April 28, 2022.)

<sup>10</sup> PRH0068803 - 804, at 803.

<sup>11</sup> Lazarus Deposition, p. 84; HACHETTE0002327 (Hachette’s “Digital Library Terms of Sale” for “Electronic Books and Digital Audiobooks – Metered Purchases as of July 1, 2019”) which sets out the terms for the two-year model that is active “as of July 1, 2019”; HACHETTE0010980 - 987.

<sup>12</sup> HACHETTE0008570 - 576.

- Wiley publishes scholarly research, reference works, academic journals, and books, with a focus on science.<sup>13</sup>
- Wiley offers a One Copy/One User model with a perpetual term for many of its titles. Wiley also has been experimenting with alternative library ebook models for select titles, including three-user models (licensed on a perpetual basis), concurrent access, time-limited (*e.g.*, one- and three-year terms) models, and subscription database models.<sup>14</sup>
- A Wiley executive testified that the majority of revenue for trade titles published by Wiley (which include the Works in Suit) in the library ebook market comes from the one-user and three-user perpetual access models.<sup>15</sup>

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<sup>13</sup> Wiley, “Corporate Information.” (<https://www.wiley.com/WileyCDA/Section/id-301454.html>, viewed on April 29, 2022.)

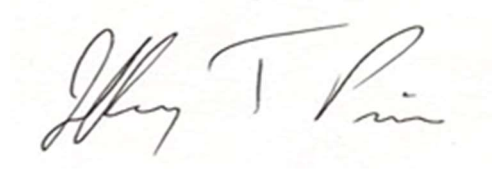
<sup>14</sup> WILEY0011693. *See also* Pavese Deposition, p. 230:7-9 (“there’s many innovative models out there trying to figure out how to help libraries serve their patrons. . . optimally) and p. 215:15-20 (explaining that Wiley makes decisions about “whether to make a title available through a subscription model” through “[t]esting, innovation, exploration, market demand, voice of customer. The same as we do any other product or any other model, just trying to always experiment and innovate on what do people -- you know, what do people want? How do they want it? You know, how is it helpful for them to pay for it? Constant innovation.”)

<sup>15</sup> Pavese Deposition, p. 231:9-15. (“Q. And at a high level, what proportion of your revenue from libraries relating to eBooks for trade titles is from perpetual access model? A. For the titles -- for trade titles and these titles-in-suit, I'd say it's probably 80 percent in the one user, three user. You know, paying per user, you know, per use in the defined territory.”)

May 25, 2022

*Highly Confidential – Attorneys' Eyes Only*

Respectfully submitted on May 25, 2022,

A handwritten signature in black ink, appearing to read "Jeffrey T. Prince". The signature is written in a cursive, flowing style. The first name "Jeffrey" is written with a large, stylized 'J'. The middle initial "T" is written as a simple vertical line. The last name "Prince" is written with a large, stylized 'P' and a trailing flourish.

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Jeffrey T. Prince